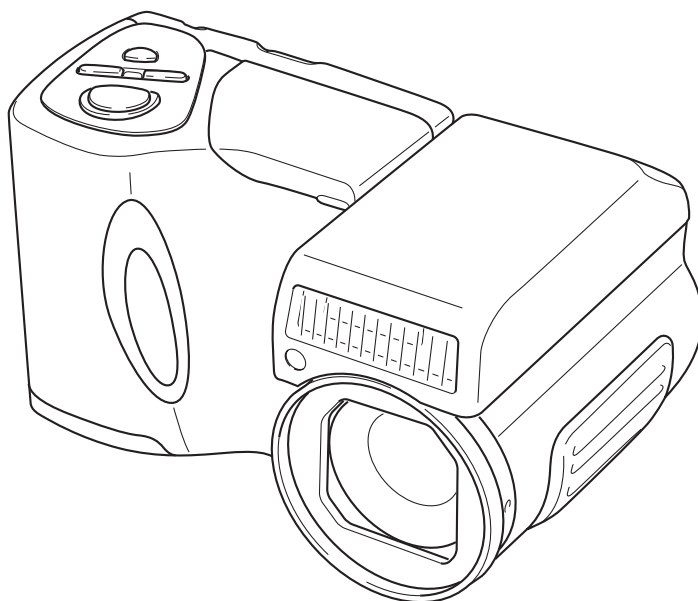


SERVICE MANUAL & PARTS LIST (without price)

QV-2900UX

(KX-787)

JUL. 2001



CASIO®

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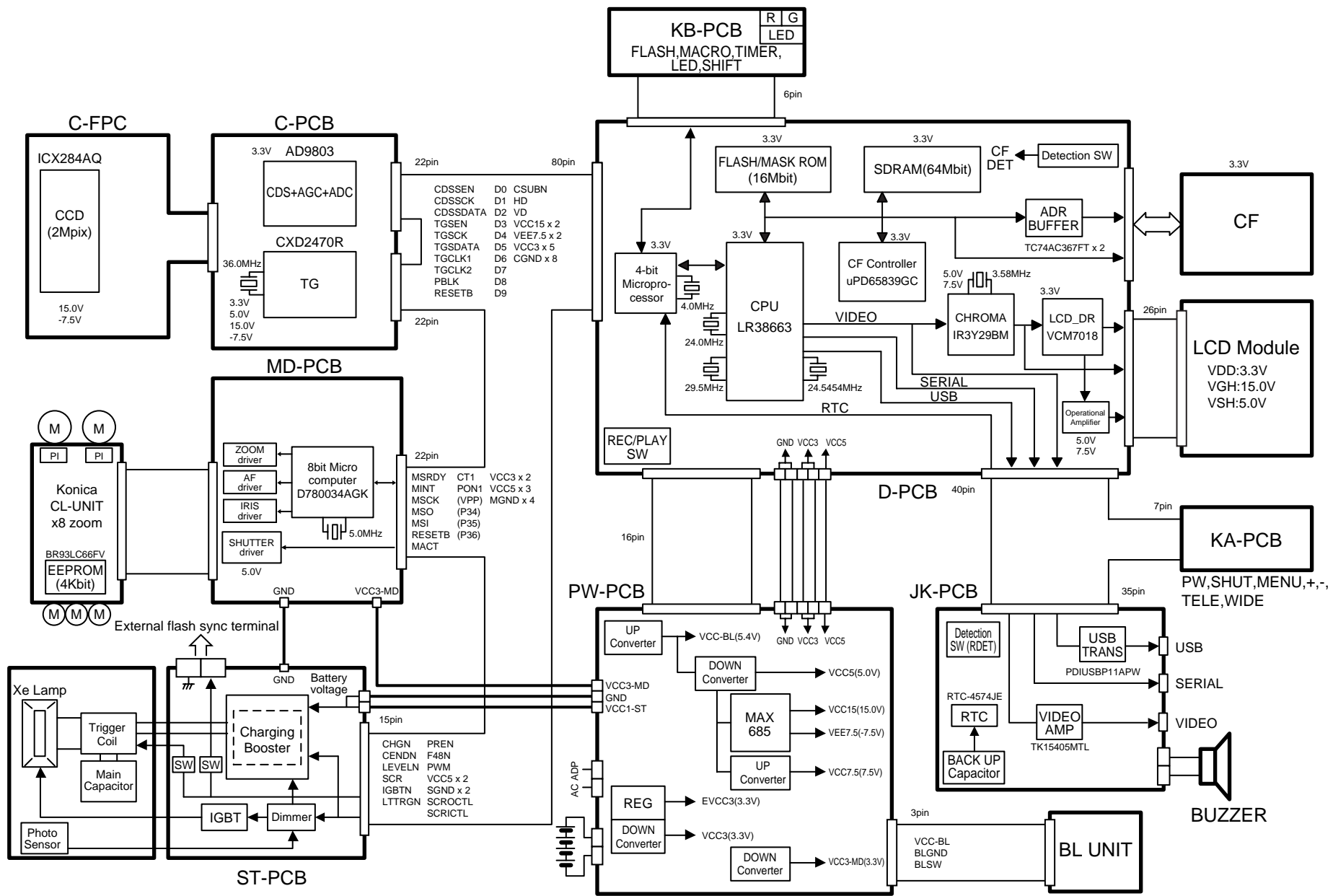
SPECIFICATIONS

File Format	Still images (including panoramas): JPEG (Exif. Ver. 2.1) / TIFF, DCF standard (Design rule for Camera File system), DPOF compatible Movies: AVI (Motion JPEG)			
Recording Medium	CompactFlash card (Type I/II), IBM Microdrive			
Recorded Image Size	1600 x 1200 pixels, 800 x 600 pixels			
Standard Memory Capacity, Number of Image Files, Computer Output Image Size (JPEG imges only)				
Still				
Image size (pixels)	Quality	File size	Number of images	
			8 MB Memory card	340 MB Microdrive
1600 x 1200	FINE	850 KB/image	8 images	401 images
	NORMAL	600 KB/image	11 images	562 images
	ECONOMY	350 KB/image	19 images	943 images
800 x 600	FINE	200 KB/image	33 images	1587 images
	NORMAL	150 KB/image	43 images	2054 images
	ECONOMY	120 KB/image	53 images	2494 images
Movie (320 x 240 pixels)				
Storage Capacity		Approximately 300 KB/second		
Recording Time		16 seconds per movie		
• The above figures are approximations only.				
Image Deletion	Single image; all images in a folder; all images in memory (with image protection)			
Imaging Element	1/2.7-inch CCD (Total Pixels: 2.11 million, Effective Pixels: 2.02 million)			
Lens	F3.2 to 3.5; f = 6 to 48 mm (equivalent to 40 to 320 mm lens for 35 mm film)			
Zoom	Optical zoom: 8X Digital zoom: 32X (in combination with optical zoom) Image size is 800 x 600 pixels when 4X digital zoom is used.			
Focusing	Contrast-detect Auto Focus; manual focus with macro mode and focus lock			
Focus Range	Normal focus: 40 cm to ∞ (15.7" to ∞) (1X zoom) 1 m to ∞ (39.4" to ∞) (8X zoom) Macro focus: 1 cm to 50 cm (0.4" to 19.7") (1 to 1.6X zoom) Manual focus: 1 cm to ∞ (0.4" to ∞) (1X zoom) 1 m to ∞ (39.4" to ∞) (8X zoom) The focusing range is the distance from the lens surface to the subject.			
Exposure Control	Light Metering: Multi-pattern, center point, spot by CCD Exposure: Program AE, Aperture priority AE, Shutter priority AE Exposure Compensation: -2EV to +2EV (1/3EV units)			
Shutter	CCD electronic shutter; mechanical shutter, BULB, 60 to 1/2000 second			
Aperture	F3.2, F4.8, F8, auto switching or manual switching			
White Balance	Automatic, fixed (4 modes), manual switching			
Self-timer	10 seconds, 2 seconds			
Built-in Flash	Flash Modes: AUTO, OFF, ON, Red eye reduction Flash Range: Approximately 0.5 to 2.5 meters			
Recording Functions	Normal, movie, panorama, landscape, night scene, portrait, self-timer, macro, Best Shot, Interval			
Monitor	1.8" TFT, low-glare color HAST LCD (122,100 pixels, 555 x 220)			

Viewfinder	LCD Monitor or optical viewfinder														
Clock	Built-in quartz digital timepiece for time and date recording and storage with image data; auto calendar up to 2049														
Input/Output Terminals	DIGITAL IN/OUT, USB port (special mini port), AC adaptor connector, VIDEO OUT (NTSC, PAL), External flash sync terminal														
Power Supply	Four AA-size alkaline or lithium batteries Four AA-size nickel-metal hydride rechargeable batteries (NP-H3) AC adaptor (AD-C620) AC adaptor charger (BC-3HA)														
Battery Life	<p>The values noted below indicate the number of hours before battery failure under normal operating temperature (25°C). These values are for reference only, and do not guarantee that any particular set of batteries actually will provide the service life indicated. Low temperatures shorten battery life.</p> <table><tr><th>Type of Operation</th><th>Continuous Playback</th><th>Continuous Recording</th></tr><tr><td>AA-size Alkaline Batteries LR6</td><td>170 minutes</td><td>80 minutes (480 shots)</td></tr><tr><td>AA-size Lithium Batteries FR6</td><td>300 minutes</td><td>200 minutes (1200 shots)</td></tr><tr><td>AA-size Ni-MH Batteries NP-H3</td><td>180 minutes</td><td>120 minutes (720 shots)</td></tr></table> <ul style="list-style-type: none">• The above figures are approximations only.• The above guidelines are based on the following battery types: Alkaline: MX1500 (AA) DURACELL ULTRA Lithium: Energizer• Battery life varies with brand. Continuous recording values show the number of shots without using the flash. The number of shots depends on use of the flash and whether flash is turned on or off.			Type of Operation	Continuous Playback	Continuous Recording	AA-size Alkaline Batteries LR6	170 minutes	80 minutes (480 shots)	AA-size Lithium Batteries FR6	300 minutes	200 minutes (1200 shots)	AA-size Ni-MH Batteries NP-H3	180 minutes	120 minutes (720 shots)
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AA-size Lithium Batteries FR6	300 minutes	200 minutes (1200 shots)													
AA-size Ni-MH Batteries NP-H3	180 minutes	120 minutes (720 shots)													
Power Consumption	Approximately 5.8 W														
Dimensions	121(W) x 80.5(H) x 66(D) mm (4.8" (W) x 3.2" (H) x 2.6" (D))														
Weight	Approximately 295 g (10.3 oz) (excluding batteries)														
Standard Accessories	Strap; lens cap; cap holder; special USB cable; special video cable; four LR6 alkaline batteries; Best Shot scene List														

- This camera does not have a separate battery to power its clock. Clock settings are cleared whenever power to the camera is cut off (by batteries going dead while the camera is not connected to an AC power outlet with the AC adaptor) for about 24 hours. After power is resumed, either by loading fresh batteries or connecting to an AC power outlet, you will have to set the correct time and date again.
- The liquid crystal panel built into this camera is the product of precision engineering, with a pixel yield of 99.99%. This also means, however that 0.01% of the pixels can be expected to fail to light or to remain lit at all times.

BLOCK DIAGRAM

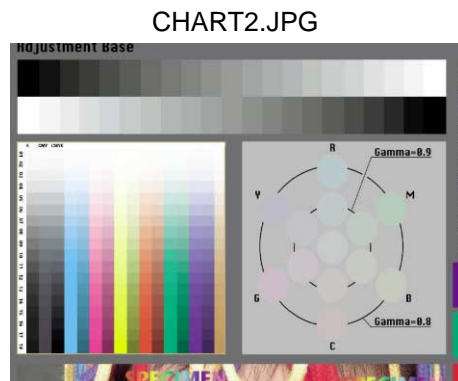
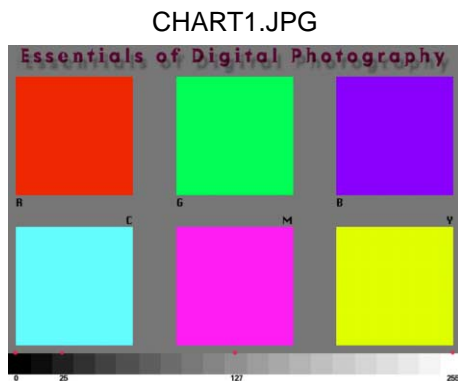


ADJUSTMENT

■ Preparation

1. PC (IBM Compatible)/OS:Windows 95/98
2. Link cable.
3. Adjustment program
 - 1) adj715.exe (Color adjustment data transfer program)
 - 2) fload.exe (Data transfer program for PC)
 - 3) _romxxxx.bin (Program data)
 - 4) _gmenuxxxx.bin (Graphic menu data)
- Notes: XXXX is 4-digit number depending upon the program version.
4. AC adaptor or stabilizer
5. Digital oscilloscope
6. Multimeter
7. Ammeter
8. Frequency counter
9. TV (with video terminal)
10. Video cable
11. Battery (battery operation/battery cover lock)
12. PC link program : Photo Loader (Communication function confirmation)
13. USB cable/USB driver (USB function confirmation)
14. Test chart (for photography check)

That which carried out color printing of picture data "CHART1.JPG" and the "CHART2.JPG".



■ Notes

Normally, power is supplied using AC adaptor.
When error occurs, use a voltage regulator, and supply the specified power.
Make sure to confirm video output specifications (NTSC or PAL) after exchanging the D-PCB.

1. PROGRAM LOADING

1-1. Important notice

Flash ROM on the D-PCB contains camera's operating program and graphic menu. The D-PCB is used in the models QV-2400UX and QV-2900UX, however, the programs are different. Therefore, the PCB provided as a spare part cannot be discriminated which program is recorded.

(Or old program may be recorded.)

Be sure to load the program after you replace the D-PCB.

Moreover, when you fail in updating the version of a program with CF card, a program breaks and a camera cannot be powered, please perform this method for loading program.

(You can upgrade the program by this loading method.)

Note: If QV-2400UX program is loaded onto QV-2900UX, display indicates "NOT715 MOTOR" and the camera does not function.

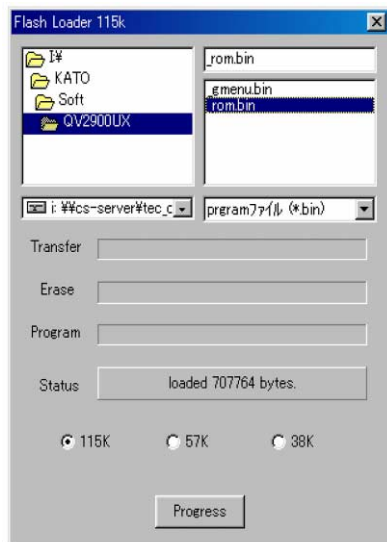
1-2. To load the program

1. Turn the camera off and remove the CF card then close the CF cover.
Disconnect the battery and AC adaptor.
2. Connect the PC link cable.
3. Boot transferring program fload.exe.
4. Choose the program data "_romXXXX.bin."

Notes:

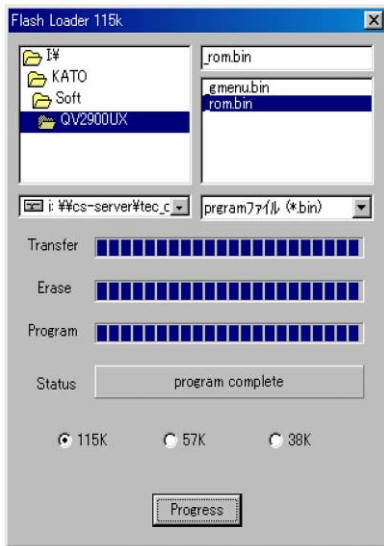
*XXXX is 4-digit number depending upon the program version.

*When loading file is chosen, "loaded XXXXXX bytes" is indicated on Status screen.



5. Choose the transfer speed 115K, 57K or 38K. If an error occurs, choose slower transfer speed.
6. Click Progress button on the fload.exe.

7. Connect an AC adaptor and turn the camera on within 5 seconds. Camera may be turned on automatically when an AC adaptor is connected. If not, use the power switch. Display shows “read time out” on Status screen and program data cannot be loaded if it takes too long between clicking Progress button and turning camera on.
8. Program data is transferred. Program executes Transfer, Erase, Program in order.



9. Program is loaded properly if Status screen shows “program completed”.
10. Disconnect the AC adaptor. (Power switch cannot turn the camera off.)
11. Choose graphic menu data “_gmenuXXXX.bin” on the above step 4 and perform steps 5 to 10.
12. Insert CF card.
13. While pressing down SHIFT and MENU keys, turn the power on to set the camera in test mode and check the version number.
14. Turn the camera off then on again and perform the final check by shooting, playing back and erasing.

2. Program version upgrading

Please check the version and update it if the version is not updated.

Note: Be sure to use AC adaptor.

2-1. How to confirm the program (graphic menu) version

1. Boot the test mode.
Turn the power on while pushing SHIFT and MENU keys.
2. Check the LCD display.

(Example)

TEST MODE						
PROG	01.	04.	23.	16.	13	← Program version
GMENU	01.	04.	06.	10.	39	← Graphic menu version
. . . .						

(Latest version as of May 30, 2001.)

2-2. Upgrading using CF card

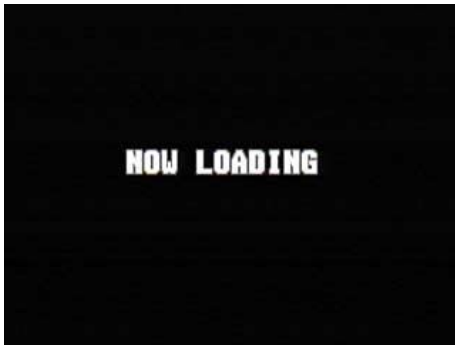
1. Copy the latest upgraded program (_romXXXX.bin) and graphic menu (_gmenuXXXX.bin) on CF card's root directory and set the CF card in the camera.
2. Connect an AC adaptor to the camera.
3. Set the camera in PLAY mode and turn the power on while pushing MENU key.

The following screen will be shown.



4. Press [+] key to select "YES" and push the shutter button.

The following screen will be shown and loading starts.



5. After about 1 minute, display shows "COMPLETE!" and camera is set in the PLAY mode.
6. Turn the camera off and change CF card to the one for shootings.
7. Set the camera in the test mode by turning power on while pushing down SHIFT and MENU keys and check the version number.
8. Turn the power off then on again and perform the final check by shooting, playing back and erasing.

3. Test mode

Note: Do not perform the menu item unless explained here.
(It may damage the internal data and camera becomes unusable.)

3-1. Booting

To boot the test mode;
Turn the camera on while pressing SHIFT and MENU buttons.

To boot MENU1 (Must be done in the test mode)
Press SHIFT → SHIFT → MENU keys in order rapidly.


To boot MENU2 (Must be done in the test mode)
Press FLASH → FLASH → MENU keys in order rapidly.

To boot MENU3 (Must be done in the test mode)
Press SELF → SELF → MENU keys in order rapidly.

* To execute
Use + or – keys to select a test item then press shutter button to execute it.

3-2. Item for testing

① TEST MODE



- • TEST MODE
- • PROGRAM Version
- • Graphic Menu Version
- • Loader Version
- • Motor MCU Version
- • Power MCU Version
- • CCD ADJUST 1 (Yes/No/NG)
- • CCD ADJUST 2 (Yes/No/NG)
- • STROBE ADJUST (Yes/No/NG)
- • KIZU (Yes/No/NG)
- • KONICA (Yes/No/NG)
- • CASIO (Yes/No/NG)

Indicates in green-color if all items have been adjusted.

Indicates "YES" if adjustments have been completed.
Indicates "NO" if adjustments have not been proceeded.
Indicates "NG" if an adjustments failure occurred.

② MENU1



③ MENU2

```
MENU2
1.CCD ADJ ALL
2.FF ADJUST
3.CCD1 (AWB)
4.CCD2 (SHUTTER)
5.KIZU
6.FC ADJUST
7.STROBE ADJUST
```

④ MENU3

```
MENU3 1/3
1.DISPLAY LENS ADJ
2.REC INFO
3.BATT.TEST
4.PROG+GMENU UPDATE
5.PROG UPDATE
6.GMENU UPDATE
7.CHECK SUM
8.OSD DATA CHECK
9.ERROR MESSAGE CHECK
10.SDRAM CHECK
```

```
MENU3 2/3
11.KEY CHECK
12.LED CHECK (CONTROL)
13.CF CHECK
14.CF WRITE TEST
15.AF DATA SAVE
16.EEPROM TEST
17.ADJ CLEAR
18.NOISE CAPTURE
19.BAYER CAPTURE
20.SHUTTER CLOSE REC
```

```
MENU3 3/3
21.SHUTTER SPEED CONST
22.WHITE
23.BLACK
```

4. Adjustment

4-1. Flash adjustment

1. General

When you exchange a flash unit or lens unit please perform this adjustment.

2. Necessary equipment

- (1) Dark room
- (2) AC adaptor
- (3) Gray paper (Superior's oxford gray No. 22)

The following sizes are available from us (also available from camra shop).

Parts code	Parts name	Specifications
1904 5411	Superior photographing background paper	No. 22 (1.75 x 2.7 m)
1904 5412	Sperior photographing background paper	No. 22 (2.72 x 11 m)

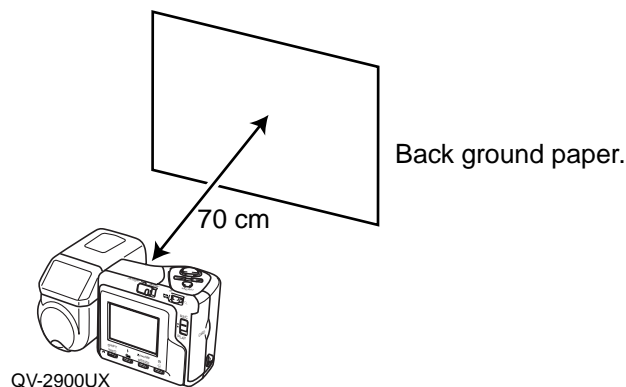
3. Condition

- (1) Perform in a dark room.
- (2) Distance between flash lens and gray paper should be 70 ± 5 cm.
- (3) Use lighter color of the gray paper.
Paper should be larger enough to fit in a picture taken from 70 cm distance.
(Reference; more than 1.5 m x 2.0 m)

4. Adjustment

- (1) Connect an AC adaptor to the camera.
- (2) Set the camera in REC mode.
- (3) Boot MENU 2 in the test mode by the following operations;
Turn the power on while pushing SHIFT and MENU keys.
Push FLASH, FLASH, and MENU keys rapidly in order.
- (4) Using + and – keys, select STROBE ADJ and push the shutter release button.
- (5) Adjustment is completed after emitting flash 5 times.
1st flashing; Checking amount of light in normal shooting
(Emitting 4 times maximum changing PWM value.)
2nd flashing; Confirming amount of light of the 1st flashing.
3rd flashing; Checking brightness after changing PWM value.
4th flashing; Checking the circuit for changing aperture (F2.8 -> F5.6).

5. Block diagram



4-2. Flash operation and recharge operation

1. General

When you exchange a flash unit, please perform this adjustment.

2. Necessary equipment

- (1) Dark room
- (2) AC adaptor
- (3) Gray paper (Superior's oxford gray No. 22)

The following sizes are available from us (also available from camra shop).

Parts code	Parts name	Specifications
1904 5411	Superior photographing background paper	No. 22 (1.75 x 2.7m)
1904 5412	Sperior photographing background paper	No. 22 (2.72 x 11m)

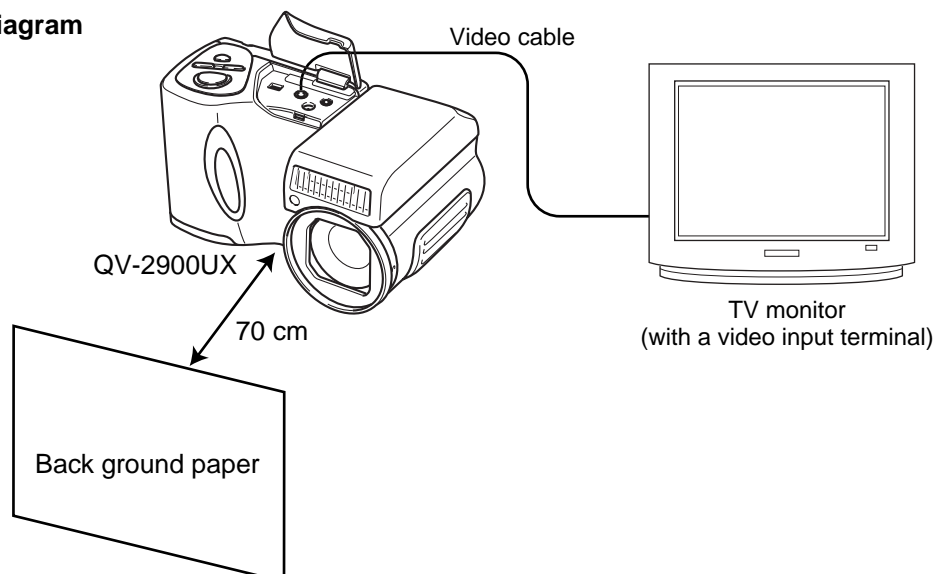
3. Condition

- (1) Perform in a dark room.
 - (2) red-eye reduction mode.
 - (3) Distance between flash lens and gray paper should be 70 cm.
 - (4) Use lighter color of the gray paper.
- Paper should be larger enough to fit in a picture taken from 70 cm distance.
(Reference; more than 1.5m x 2.0m)

4. Adjustment

- (1) Connect an AC adaptor to the camera.
- (2) Set the camera in red-eye reduction mode.
- (3) Shoot a back ground paper (confirm pre-flashing and actual flashing.)
- (4) Connect the camera and TV's video terminal with a video cable and check the picture.
Should not be too white, too dark, or colored.
- (5) Flash charging current should not exceed 1.3 A.
- (6) Shoot in non-flash mode and confirm flash does not emit light.

5. Block diagram



4-3. Current consumption

1. General

When consumption of a battery is early, check.

2. Conditions

- Set QV-2900UX to “PLAY” mode.

3. Preparation

- (1) Voltage regulator.
- (2) Ammeter.

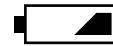
4. Adjustment procedure

- (1) Current consumption (DC in = 6.0 ± 0.1 [V])
 - Make sure that current consumption is less than 500 mA in PLAY mode.
 - Make sure that current consumption is less than 650 mA in REC mode.
(Flash charge current is not included)
- (2) Lower the voltage from 6 V as shown below then make sure the battery warning indicator changes.

DC in = 4.80 ± 0.05 [V] (one indicator is off)



DC in = 4.50 ± 0.05 [V] (two indicators are off)



DC in = 4.15 ± 0.05 [V] (All the indicators are off)



4-4. VCOM DC adjustment

1. General

Perform these adjustments when you replace LCD module or D-PCB.

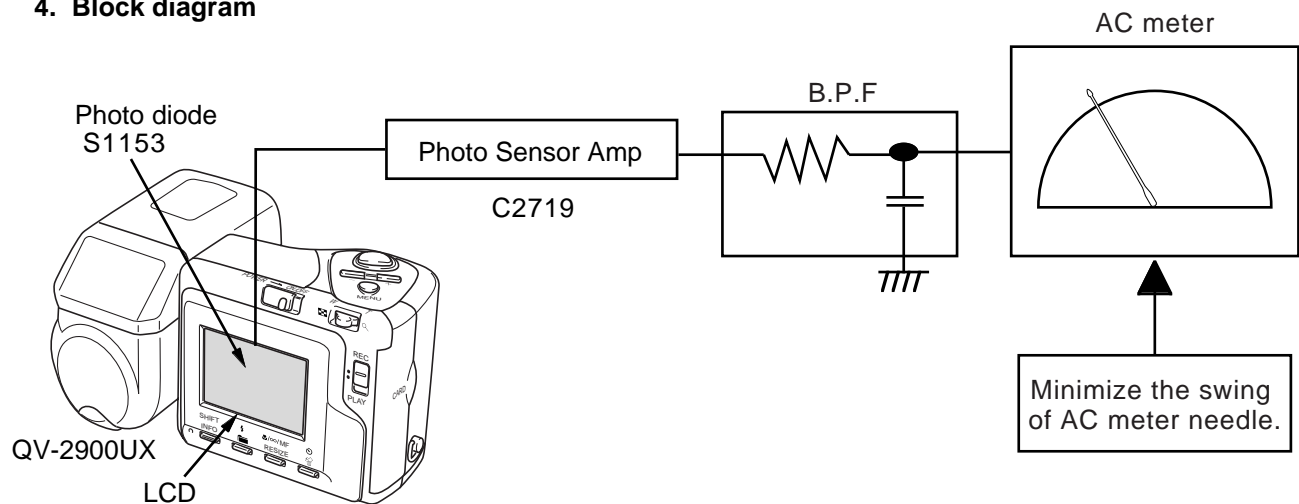
2. Preparation

- (1) AC adaptor or stabilizer.
- (2) Photo sensor (S1153)/ Photo sensor amp (C2719)
- (3) Digital oscilloscope or AC meter.
- (3) B. P. F
NTSC: Center frequency; approx. 60 ± 5 Hz
PAL: Center frequency; approx. 50 ± 5 Hz

3. Adjustment and checking

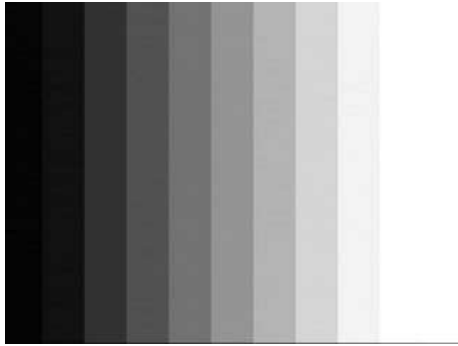
- (1) Boot MENU 1 on the test mode.
 1. Turn the camera on while pushing SHIFT and MENU keys.
 2. Push SHIFT keys twice then MENU keys rapidly.
- (2) Select and execute 50 PERCENT GRAY.
- (3) Monitor the Photo Sensor Amp output via a bypass filter with an AC meter and adjust VR321 so that the meter needle swing is minimum.
Instead of an AC meter, you can use an oscilloscope. In that case, adjust VR321 for minimum ripple component.

4. Block diagram



Note: Easy adjustment

- (1) Boot MENU 1 on the test mode.
 1. Turn the camera on while pushing SHIFT and MENU keys.
 2. Push SHIFT keys twice then MENU keys rapidly.
- (2) Select and execute GRAY SCALE (10 STEP).
- (3) Adjust VR321 for distinctive 10 gray steps.



4-5. Operation check

1. General

After repairs, please check if needed.

2. Preparation

- (1) Batteries.
- (2) AC adaptor.
- (3) PC (IBM compatible)/OS:Windows 95/98.
- (4) Link cable.
- (5) Photo loader (program).
- (6) TV (with video terminal).
- (7) Video cable.
- (8) USB cable/USB driver
- (9) Test chart (for photography check)

(That which carried out color printing of picture data "CHART1.JPG" and the "CHART2.JPG".)

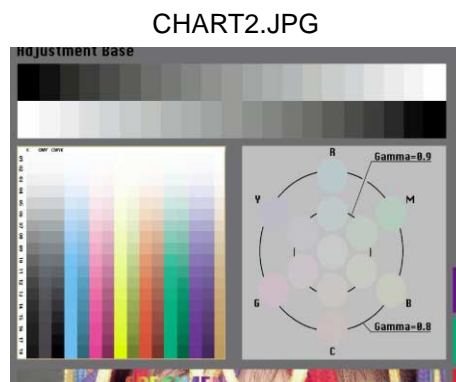
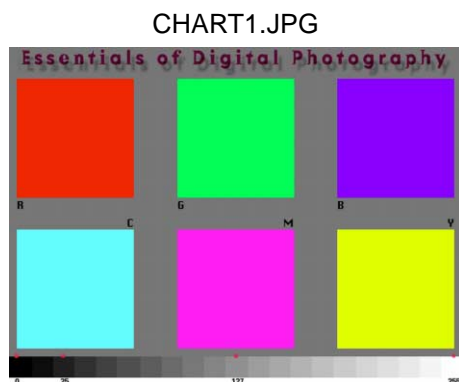
3. Check matter

- (1) Shock and flash check (essential)
 - ① Shoot the test chart without flashing.
 - ② Shoot the test chart with flashing.
 - ③ Confirm the result (compare with properly functioning camera) for;
 - Color
 - Focus and resolution
- (2) Anti-shock, Battery operations, AC Adaptor check
- (3) Power jack, switch, buttons operations
- (4) CompactFlash insertion/eject operation, Cover open/close operation, battery cover open/close operation. Lens block rotation
- (5) Image reversing, Normal/Macro switching, ZOOM operation, AE operation, AF operation, Self-timer count down display, exposure adjustment function, flash display function, self-timer function.
- (6) Video output, serial communication, USB function.
- (7) Appearance check (Dust on the lens, scratch, dirt, damage, etc.)

4. Note

- (1) Make sure Video out setting are appropriate to your country.
(i.e. Japan=NTSC, England = PAL)

5. Test chart picture



5. D-PCB Assy

5-1. VCO free run frequency adjustment

Room temperature should be 20 ± 10 °C

1. Preparation

- AC adaptor or voltage regulator
- Frequency counter

2. Adjustment procedure

- (1) Connect SYF (CP355) and GND (CP344).
- (2) Monitor HDB (CP301) with frequency counter and adjust VR320 so that frequency becomes 15.734 ± 0.1 KHz.
- (3) After completing adjustment, disconnect SYF (CP355) and GND (CP344).

5-2. VCOM AC adjustment and VCOM DC coarse adjustment

1. General

Perform these adjustments after D PCB or LCD module is replaced.

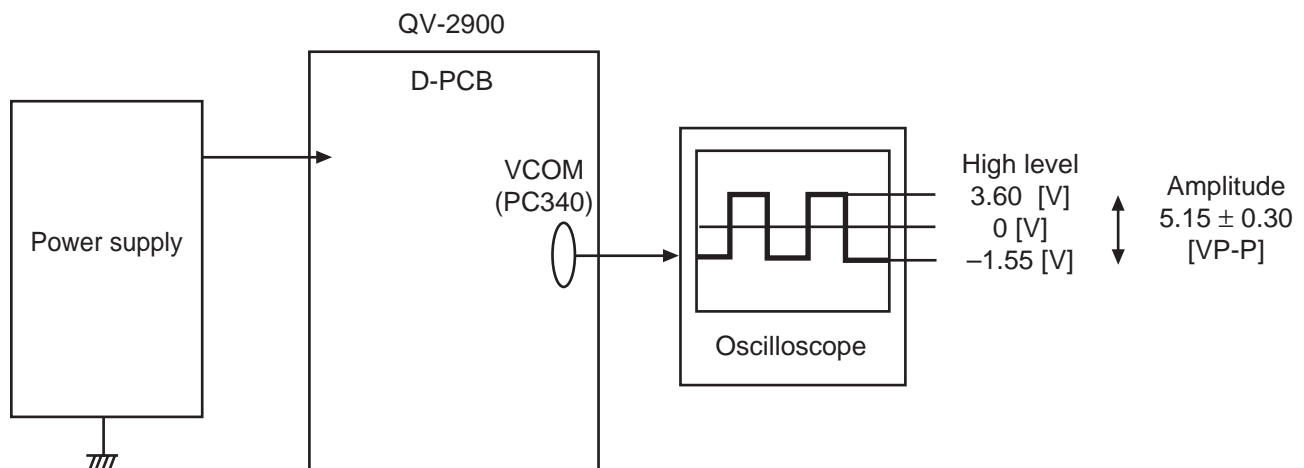
2. Preparation

- AC adaptor or voltage regulator
- Digital oscilloscope

3. Adjustment procedure

- (1) Make sure amplitude of VCOM output (CP340) is 5.15 ± 0.30 Vp-p.
- (2) Adjust VR321 so that maximum VCOM output (CP340) will be 3.60 ± 0.20 V.

4. Connection diagram



5-3. RGB AMP and Sub-Brightness voltage setting adjustment

1. General

Perform the following adjustments in order.

5-3. RGB AMP and Sub-Brightness voltage setting adjustment

5-4. Contrast and Brightness voltage setting adjustment

5-5. TINT setting adjustment

2. Preparation

- AC adaptor or voltage regulator
- Digital oscilloscope

3. Adjustment procedure

- (1) Start up Test mode Menu1.
 1. Turn POWER on while pressing SHIFT key and MENU button simultaneously
 2. Quickly press keys in the order of SHIFT key, SHIFT key and MENU key.
- (2) Select / Execute GRAY SCALE (10 step). (NTSC)
- (3) Impress the killer terminal (CP308) with VCC5 (CP520) voltage through a 22 k Ω resistance.
- (4) Trigger VG waveform (CP322) by FRP (CP300) signal to adjust as noted below.
- (5) Adjust RGB-AMP VR (VR302) so that pedestal-pedestal voltage of VG(CP322) signal is 4.70 ± 0.05 Vp-p.
- (6) Adjust SUB R BRIGHT VR (VR305) so that potential between VR (CP320) signal's pedestal and pedestal is 4.70 ± 0.05 Vp-p.
- (7) Adjust SUB B BRIGHT VR (VR304) so that potential between VB (CP324) signal's pedestal and pedestal is 4.55 ± 0.05 Vp-p.

3. Notes

- Consecutively, execute **5-4. Contrast and Brightness voltage setting adjustment.**
- Make sure that waveforms are not distorted.

4. Connection diagram

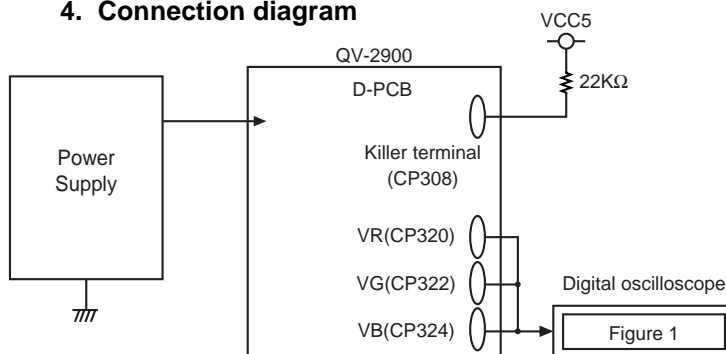


Figure 1

5-4. Contrast and Brightness voltage setting adjustment

1. Preparation

- AC adaptor or voltage regulator
- Digital oscilloscope

2. Adjustment procedure

- (1) Start up Test mode Menu1.
 1. Turn POWER on while pressing SHIFT key and MENU button simultaneously
 2. Quickly press keys in the order of SHIFT key, SHIFT key and MENU key.
- (2) Select / Execute GRAY SCALE (10 step). (NTSC)
- (3) Trigger VG waveform (CP322) by FRP (CP300) signal to adjust as noted below.
- (4) Adjust CONTRAST VR (VR306) so that contrast terminal voltage(CP302) signal is 1.50 ± 0.05 V.
- (5) Adjust BRIGHT VR (VR303) so that potential between signal's pedestal and 4 step is 2.25 ± 0.05 Vp-p.
- (6) Adjust CONTRAST VR (VR306) so that potential between signal's pedestal and 10 step is 2.85 ± 0.05 Vp-p.
- (7) Remove the resistance set between the killer terminal (CP308) and the VCC5 (CP520).

3. Notes

- Consecutively, execute **5-5. TINT setting adjustment**.
- Make sure that waveforms are not distorted.

4. Connection diagram

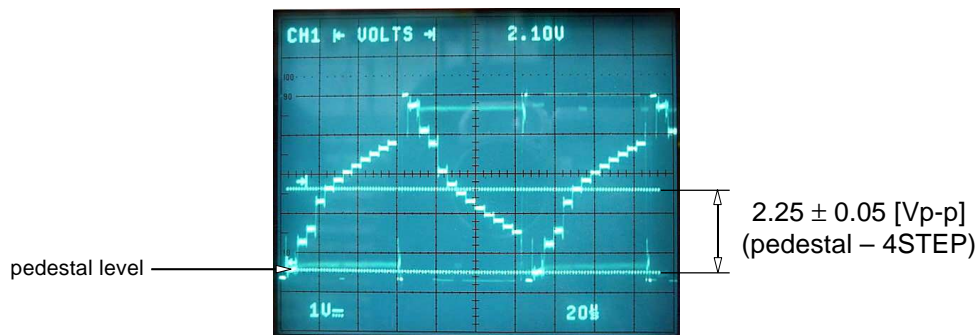
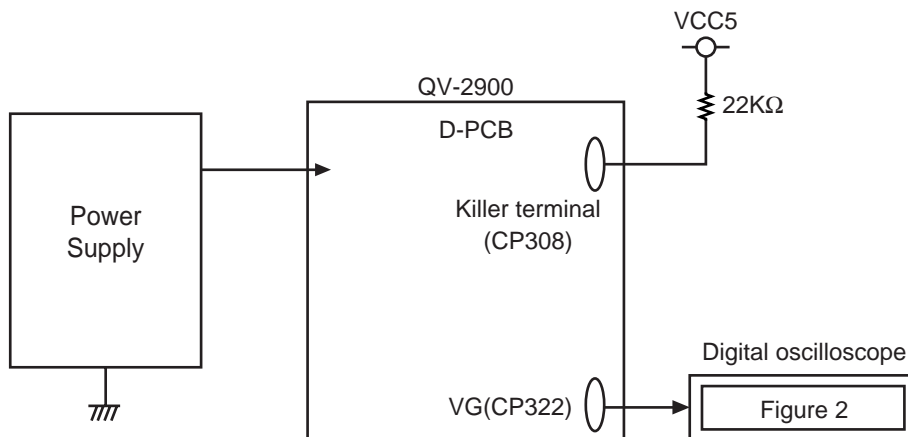


Figure 2

5-5. TINT setting adjustment

1. Preparation

- AC adaptor or voltage regulator
- Digital oscilloscope

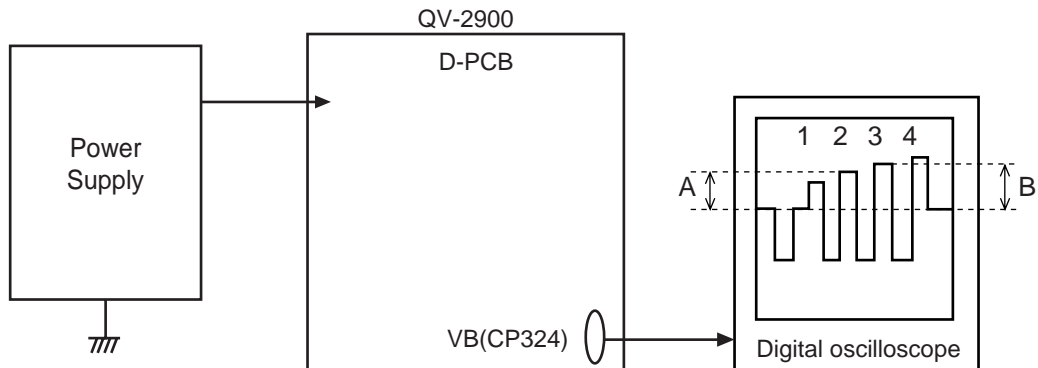
2. Adjustment procedure

- (1) Start up Test mode Menu1.
 1. Turn POWER on while pressing SHIFT key and MENU button simultaneously
 2. Quickly press keys in the order of SHIFT key, SHIFT key and MENU key.
- (2) Select / Execute COLOR BAR. (NTSC)
- (3) Trigger FRP (CP300) signal to adjust as noted below.
- (4) Adjust the VR301 in order to set the potential difference of the fourth pulse height B (between a pedestal and the peak) and the second pulse height A (between a pedestal and the peak) of the four pulses of the VB wave form (CP324) to be less than 0.1 [Vp-p].

3. Notes

- Perform the adjustment consecutively after RGB AMP, Sub brightness, Brightness adjustments.

4. Connection diagram



6. PW-PCB Assy

6-1. VCC3, VCC3-MD, VCC5, VCC7.5, EVCC3 Voltage check

1. Preparation

- AC adaptor or voltage regulator
- Multimeter

2. Adjustment procedure

Confirm the following voltages.

VCC3 (CP110) = 3.30 ± 0.10 [V]

VCC3 -MD (CP115) = 3.30 ± 0.10 [V]

VCC5 (CP125) = 5.00 ± 0.15 [V]

VCC7.5 (CP130) = 7.50 ± 0.50 [V]

EVCC3 (CP140) = 3.30 ± 0.10 [V]

6-2. VCC15, VEE7.5 Adjustment

1. Preparation

- AC adaptor or voltage regulator
- Multimeter

2. Adjustment procedure

• Adjust VR135 so that VCC15 (CP136) = 15.0 ± 0.10 V.

• Adjust VR136 so that VEE7.5 (CP135) = -7.5 ± 0.10 V.

DISASSEMBLY

Tool

Soldering iron / solder / desoldering wire
precision screwdrivers / Tweezers
Discharge tool (Resistor 1.5 k Ω 5 W)



- Remove the screw at the bottom.



- Remove the screw at the bottom.



Main block

- Remove CF card.



- Remove the battery.



- Remove the screw on the side of the lens.



- Remove the screw on the side of the lens.



7. Pull to the right with pushing the arrowed area.



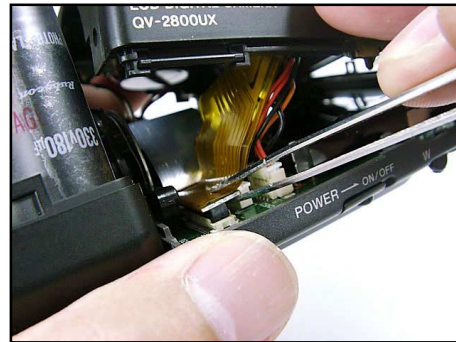
11. Open the case.



8. Remove the front case block.



12. Remove the connector (CN530).



9. Rotate the lens and remove the screw on the side.



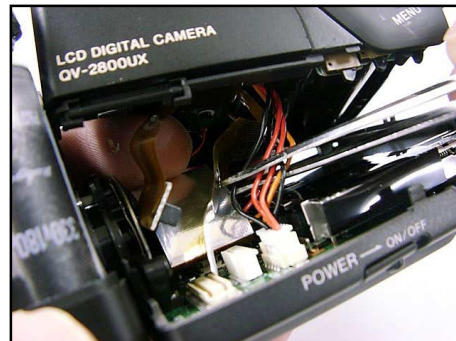
13. Remove the connector (CN522).



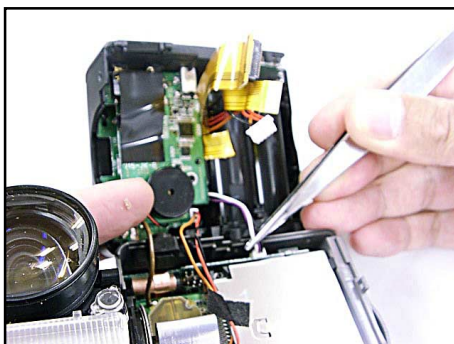
10. Rotate the lens and remove the screw on the side.



14. Remove the connector (CN521).



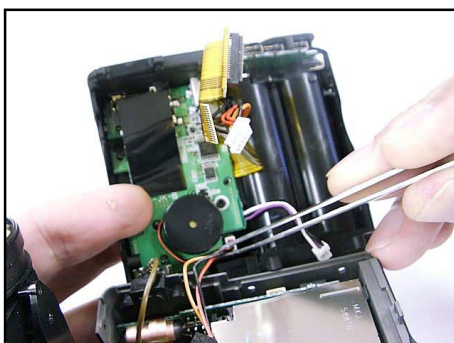
15. Remove the connector (CN900).



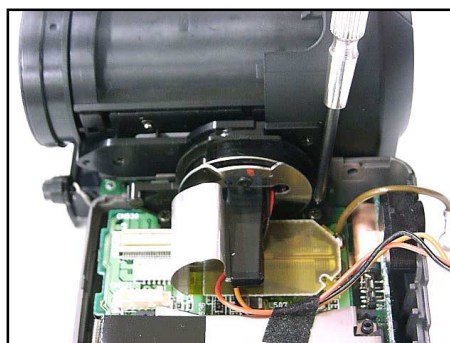
19. Remove the screw affixing the lens block.



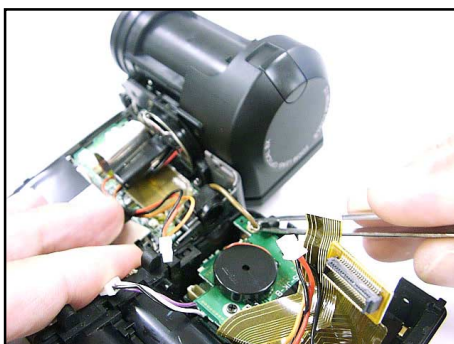
16. Remove the connector (CN101).



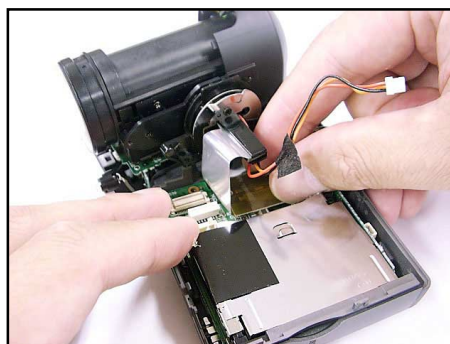
20. Remove the screw affixing the lens block.



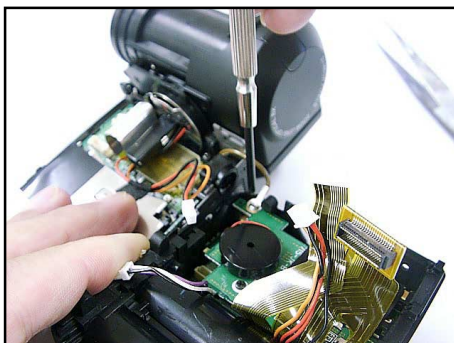
17. Lift up the bending of solderless terminal.



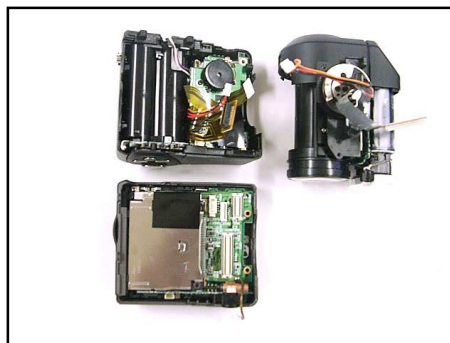
21. Remove the connector (CN510).



18. Remove the silver screw.

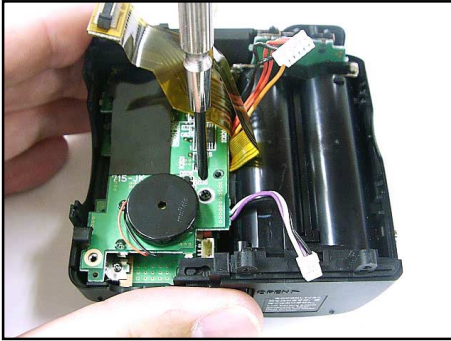


22. Separated in three blocks.



Lower case block

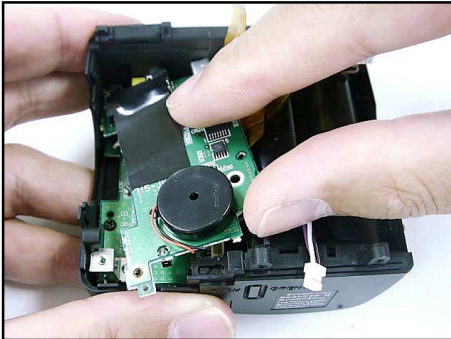
1. Remove the screw.



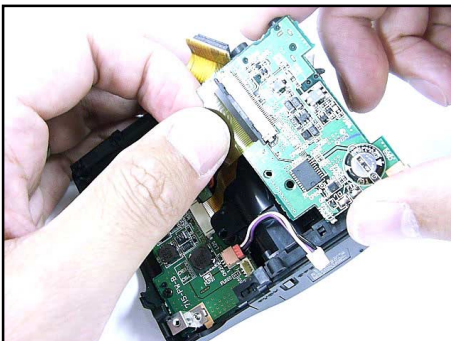
2. The screw (1.7 × 9 black)



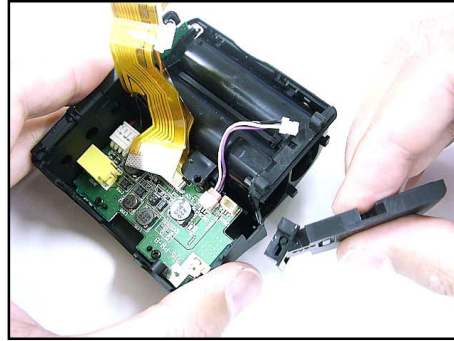
3. Remove the JK-PCB.



4. Remove the connector (CN800).



5. Remove the battery cover.



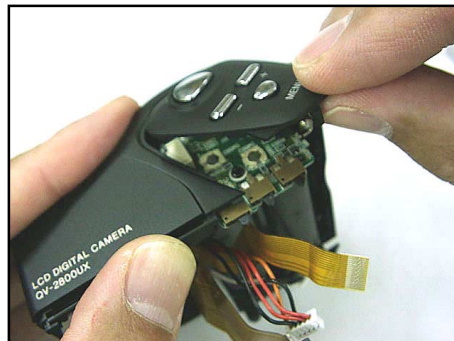
6. Remove the screw at the bottom.



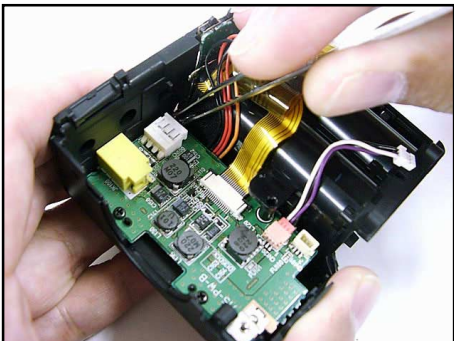
7. Open the case.



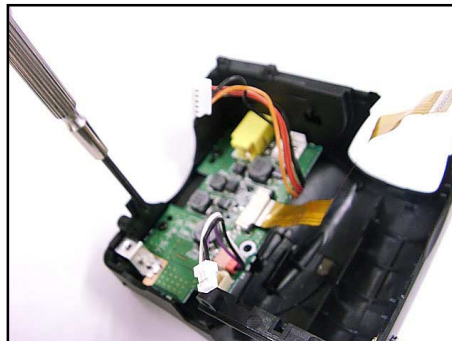
8. Remove the upper panel.



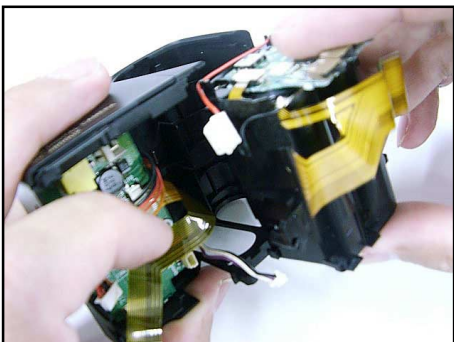
9. Remove the connector (CN100).



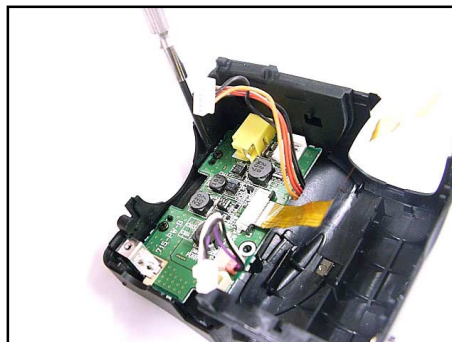
13. Remove the screw.



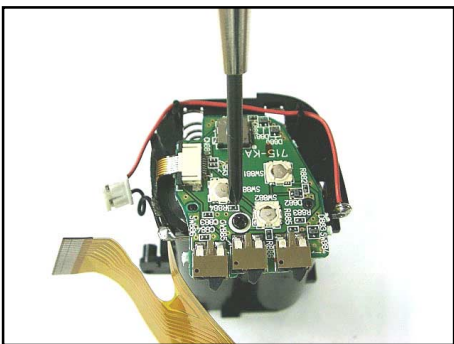
10. Remove the battery holder.



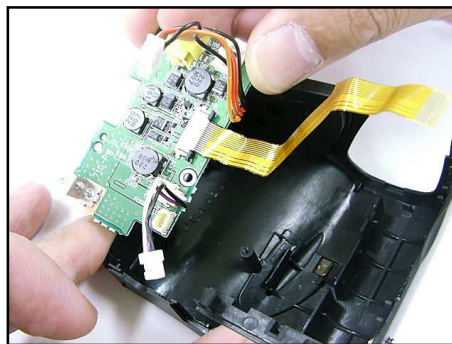
14. Remove the screw.



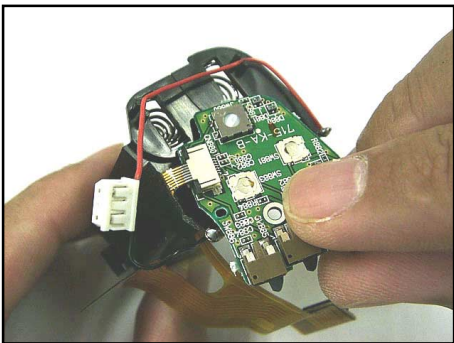
11. Remove the screw.



15. Remove the PW-PCB.



12. Remove the KA-PCB.

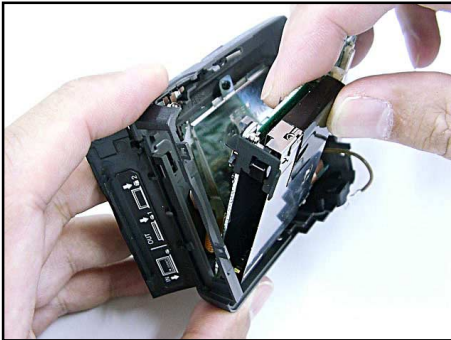


Upper case block

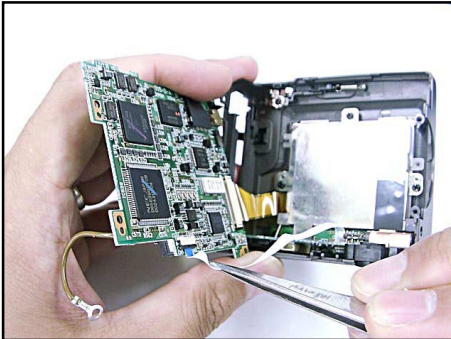
1. Remove the screw.



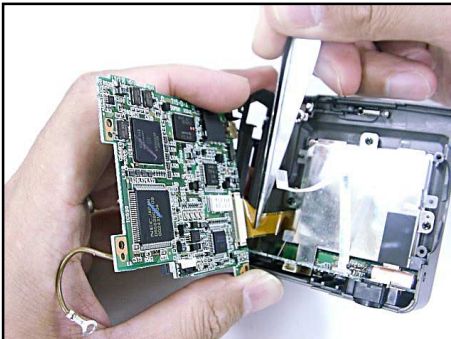
2. Remove the D-PCB.



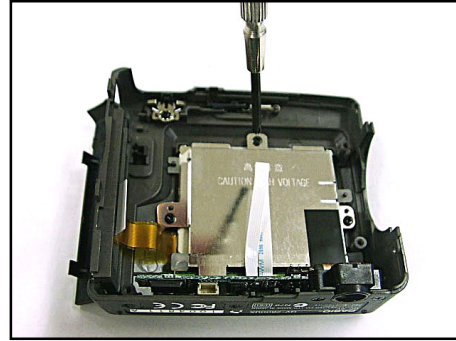
3. Remove the connector (CN540).



4. Remove the connector (CN340).



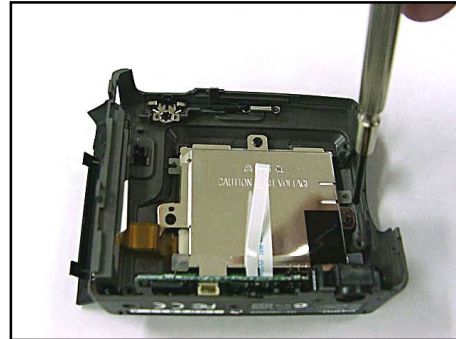
5. Remove the screw.



6. Remove the screw.



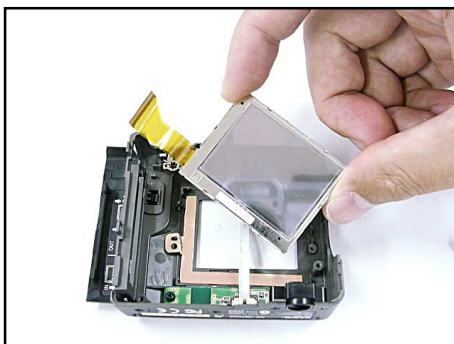
7. Remove the screw.



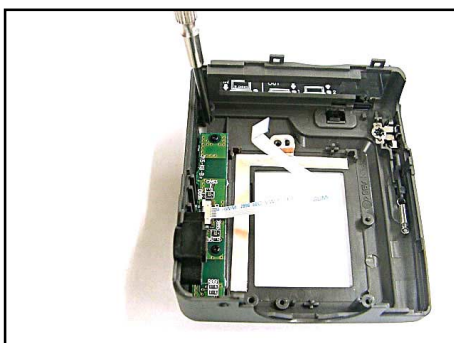
8. Remove the Back-light.



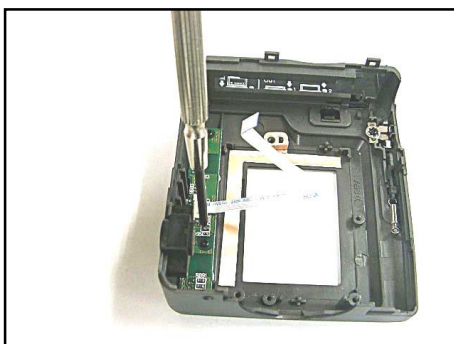
9. Remove the LCD.



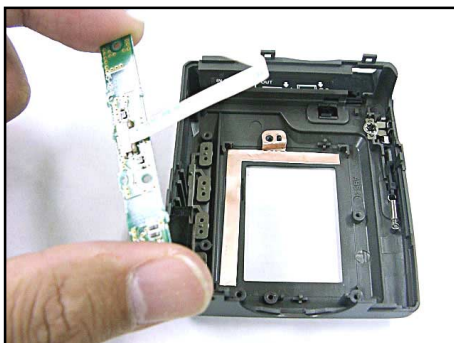
10. Remove the screw.



11. Remove the screw.



12. Remove the KB-PCB.

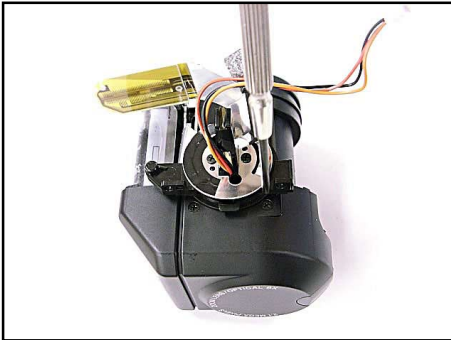


Lens block

1. Remove the screw.



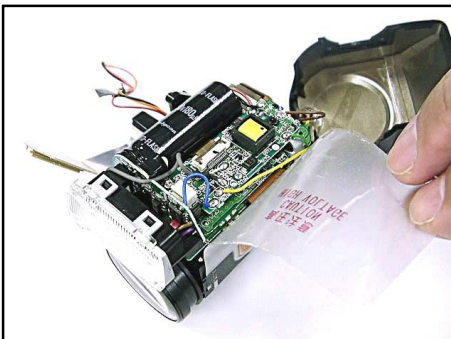
2. Remove the screw.



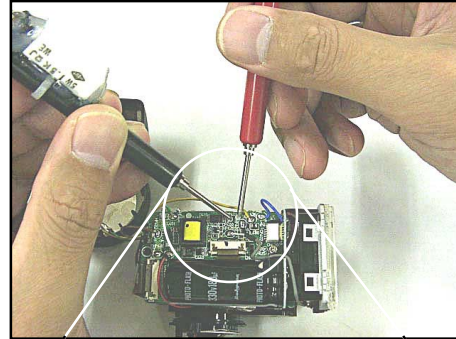
3. Remove the case.



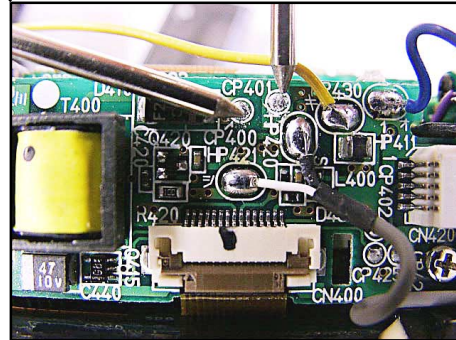
4. Peel off the insulation sheet.



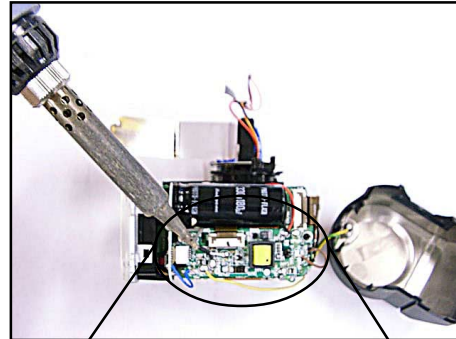
5. Discharge flash capacitor.
(locates between CP400 and CP401)



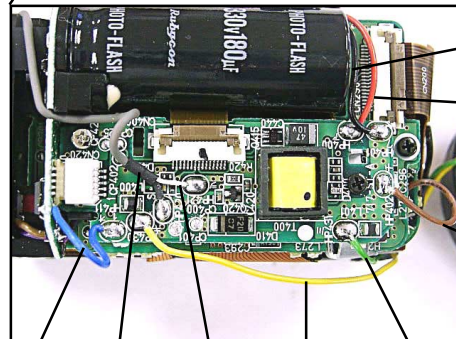
magnified picture



6. Unsolder the 8 lead wire.



magnified picture



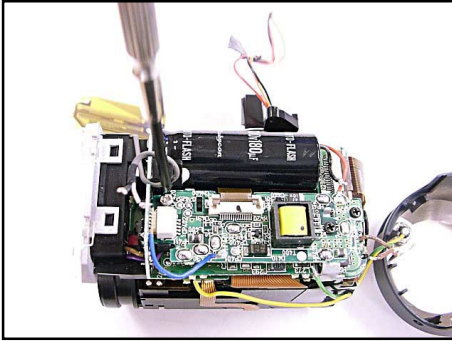
black

red

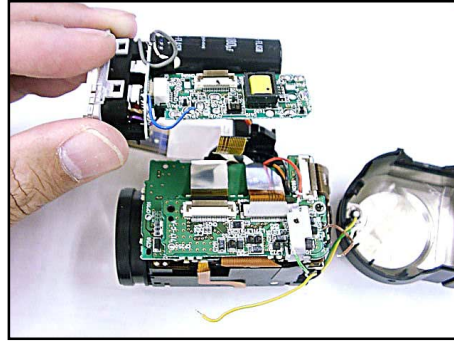
brown

blue black white yellow green

7. Remove the screw. (1.7×12 silver)

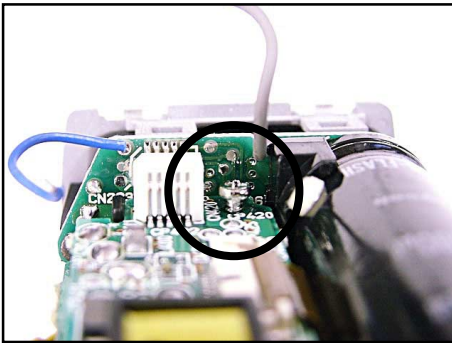


10. Remove the flash block.

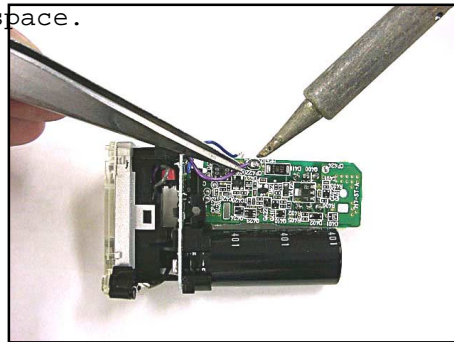


* tips for the assembly

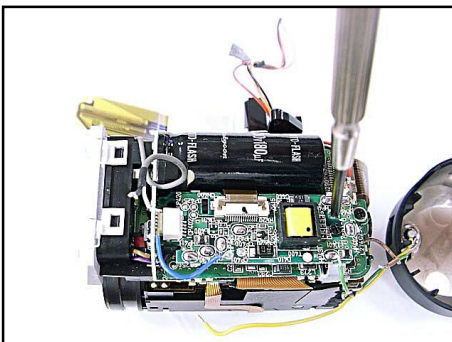
Tighten the screw as hard as there is a space.



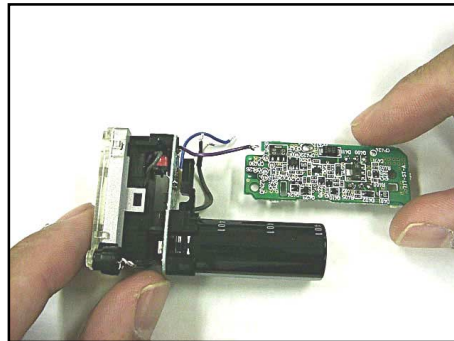
11. Unsolder the purple lead wire.



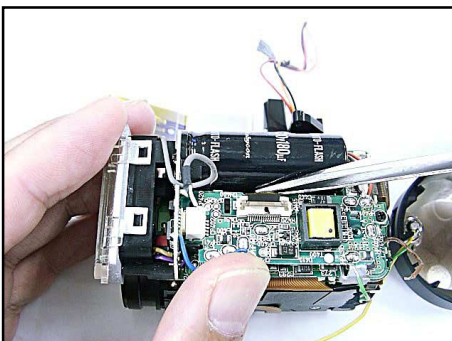
8. Remove the screw.



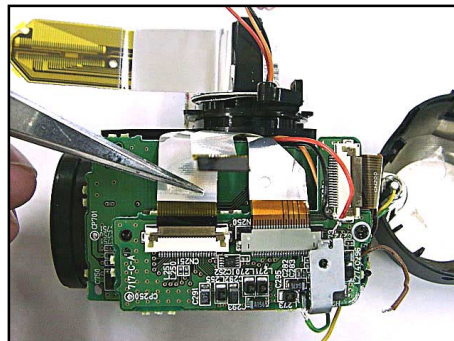
12. Remove the ST-PCB.



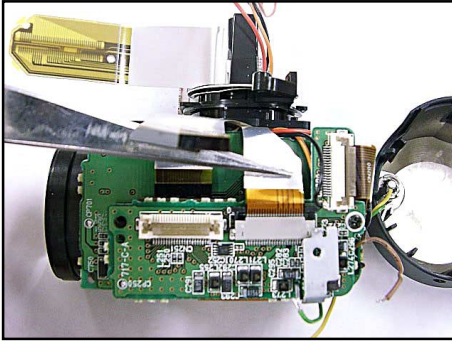
9. Remove the connector (CN400).



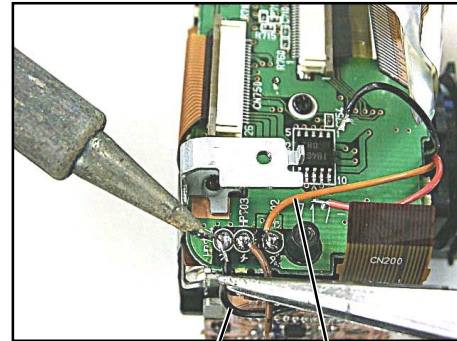
13. Remove the connector (CN251).



14. Remove the connector (CN250).

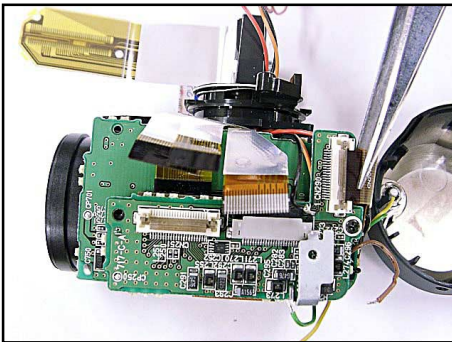


18. Unsolder two lead wires.

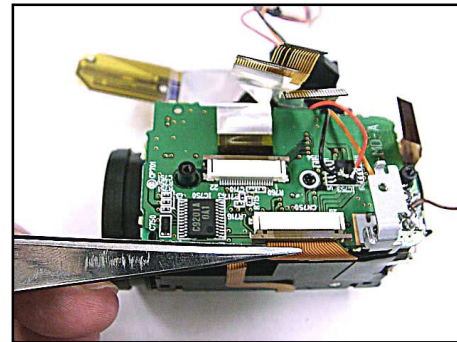


black orange

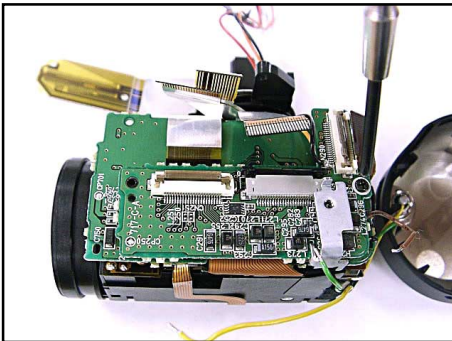
15 Remove the connector (CN290).



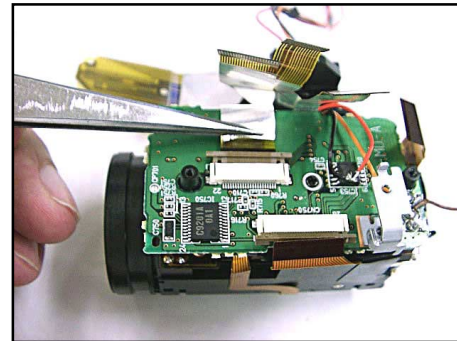
19. Remove the connector (CN750).



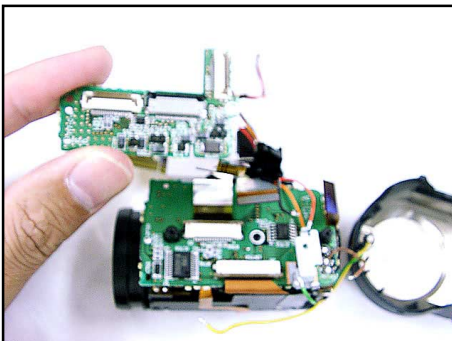
16. Remove the screw.



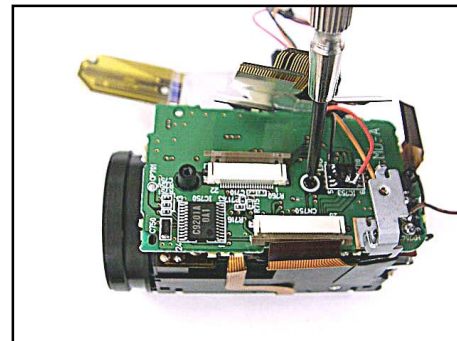
20. Remove the connector (CN700).



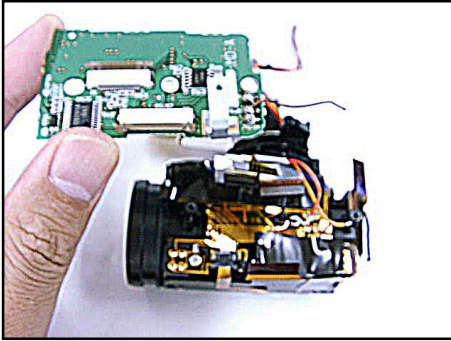
17. Remove the C-PCB.



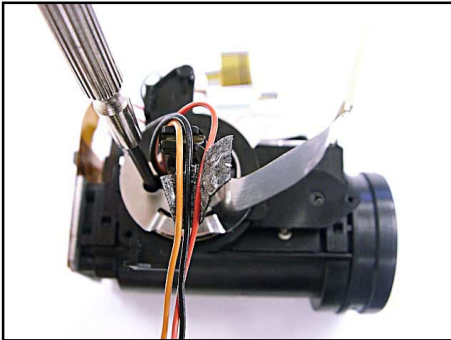
21. Remove the screw.



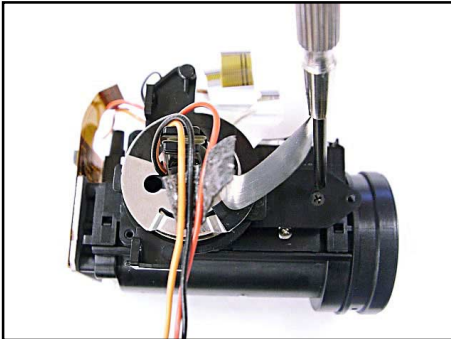
22. Remove the MD-PCB.



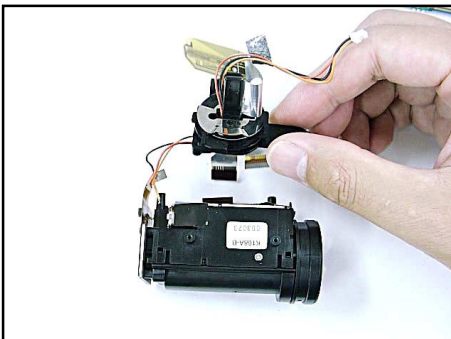
23. Rotate L-case unit and remove the screw .



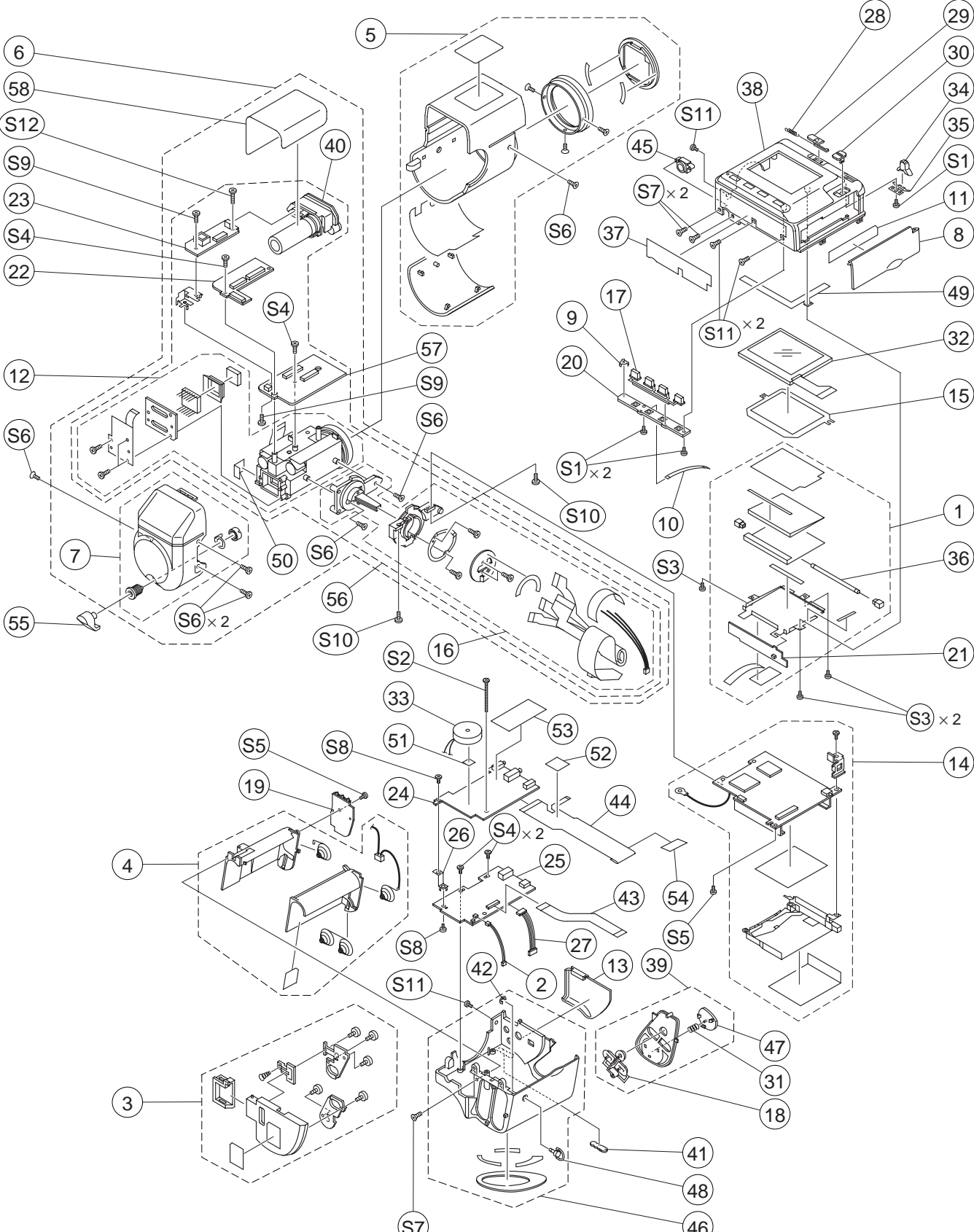
24. Remove the screw.



25. Remove the L-case unit.



EXPLODED VIEW



PARTS PRICE LIST

MAIN BODY COMPONENT

N	Item	Code No.	Parts Name	Specification	Applicable	Q	Price Code	R
	1	1003 4054	BACK LIGHT ASSY	K342253*1 TK(K715)	Common	1	CR	A
	2	1002 8729	CABLE/BACK LIGHT	K442243-1	Common	1	AF	X
	3	1003 8336	COVER/BATTERY	K342255*004V02TK	Common	1	BB	A
	4	1003 4056	HOLDER/BATTERY	K342254*1 TK(K715)	Common	1	BI	X
N	5	1005 5365	CASE/LENS UNIT/FRONT	RJK501548*002V01 TK	Common	1	CF	X
N	6	1005 5363	LENS & CASE ASSY	RJK501554*002V01 TK	Common	1	EM	A
N	7	1005 5364	CASE/LENS UNIT/BUCK	RJK501562*002V01 TK	Common	1	BU	X
N	8	1005 4116	COVER/CF	K342115-005V01	Common	1	AF	B
	9	1002 8714	COVER/LED	K342138-1	Common	1	AB	X
	10	1003 4795	CABLE/KEY	K442309-001V02	Common	1	AC	X
	11	1003 4927	LABEL/COVER/CF	K441492-004V01	Common	1	AA	B
	12	1003 8346	LENS & CCD ASSY	RJK501553*001V01TK	Common	1	EG	A
N	13	1005 4117	COVER/CONNECTOR	K342116-006V01	Common	1	AI	B
	14	1003 4065	PCB UNIT/DIGITAL	RJK501405*001V01TK	Common	1	EG	A
	15	1002 8715	SPACER/LCD	K442235-1	Common	1	AA	X
	16	1003 8342	CASE/LENS UNIT	RJK501547*001V01TK	Common	1	CI	X
	17	1002 8712	BUTTON/MENU	K342135-1	Common	1	AH	X
	18	1002 8775	BUTTON/MODE	K342114-1	Common	1	AH	X
	19	1003 4369	PCB ASSY/KEY(KA)	K241459*2 TK(K715)	Common	1	CF	B
	20	1003 4066	PCB ASSY/KEY(KB)	K241459*3 TK(K715)	Common	1	CF	B
	21	1003 4048	PCB ASSY/BACK LIGHT	K442325*1 TK(K715)	Common	1	CI	A
	22	1003 8347	PCB ASSY/C	RJK501567*001V01TK	Common	1	CX	B
	23	1003 8343	PCB ASSY/ST	RJK501502*001V01TK	Common	1	CL	A
	24	1003 4049	PCB ASSY/JACK	K442328*1 TK(K715)	Common	1	CX	A
	25	1003 4046	PCB ASSY/POWER	K442323*1 TK(K715)	Common	1	CX	A
	26	1002 8724	PLATE/METAL	K342117-1	Common	1	AA	X
	27	1003 4794	CABLE/POWER	K442252-001V02	Common	1	AJ	X
	28	1003 4556	SPRING/POWER	K442207-001V02	Common	1	AA	X
N	29	1005 4098	KNOB/POWER	K342134-005V01	Common	1	AA	X
N	30	1005 4096	KNOB/REC	K342132-005V02	Common	1	AA	X
	31	1002 8777	SPRING/SHUTTER	K442212-1	Common	1	AA	X
	32	1002 8706	LCD MODULE/TFT	COD18T1029FN	Common	1	DE	A
	33	1003 9678	BUZZER	PKM35-4A44	Common	1	AG	X
N	34	1005 4097	KNOB/ZOOM	K342133-005V01	Common	1	AA	C
	35	1004 2653	SPRING/ZOOM	RJK501745-001V01	Common	1	AA	C
	36	3851 2113	LAMP/FLUORESCENT	CAS-1.8JS1.8-1	Common	1	AW	A
N	37	1005 4118	PLATE/RATING	K442274-006V02	Common	1	AA	X
N	38	1005 4095	CASE/UPPER	K140742-006V01	Common	1	AY	X
N	39	1005 5362	PANEL ASSY/UPPER	K342256*006V01 TK	Common	1	BC	X
	40	1003 4929	STROBE UNIT	CO-717	Common	1	CG	A
	41	1002 9692	PLATE/NAME	RJK501406-001V01	Common	1	AE	X
	42	6400 9740	WASHER	A412353-1	Common	1	AA	X
	43	1002 8725	CABLE/B-K715	K342165-1	Common	1	AG	X
	44	1002 8723	CABLE/C-K715	K241412-1	Common	1	AZ	X
	45	1002 8708	TRIPOD NUT	K342112-1	Common	1	AC	C
N	46	1005 5359	CASE ASSY/LOWER	RJK501402*006V01 TK	Common	1	BQ	X
	47	1002 8774	BUTTON/SHUTTER	K342113-1	Common	1	AG	X
	48	6613 1330	HOOK/STRAP	R340181-2	Common	1	AE	C
	49	1004 0721	PLATE/SHIELD	RJK501493-001V03	Common	1	AA	X
	50	1002 8720	TAPE/INSULATION	RJK501394-001V01	Common	1	AA	X

Notes: NEW: New registration parts
Q: Quantity used per unit
R: Rank

N	Item	Code No.	Parts Name	Specification	Applicable	Q	Price Code	R
	51	1000 1733	CUSHION	K441962-1	Common	1	AA	X
	52	1003 4797	TAPE/INSULATION	RJK501511-001V01	Common	1	AA	X
	53	1004 0278	PLATE/INSULATION	RJK501655-001V02	Common	1	AA	X
	54	1002 8728	TAPE/ADHESION	K442226-1	Common	1	AA	X
	55	1003 4926	CAP/CONNECTOR	K342249-001V01	Common	1	AB	B
	56	1003 8341	LENS,PCB&STROBE ASSY	RJK501550*001V01TK	Common	1	EL	A
	57	1003 8349	PCB ASSY/MD	RJK501568*001V01TK	Common	1	CX	A
	58	6614 3450	LABEL/COUSIN	K441748-1	Common	1	AA	X
	S1	1003 6886	SCREW	BT3 1.4X3.0 BK	Common	3	AA	X
	S2	1002 8722	SCREW	BT3 1.7X12.0 BK	Common	1	AA	X
	S3	1002 8704	SCREW	BT3 1.7X3.0 BK	Common	3	AA	X
	S4	1001 2551	SCREW	BT3 1.7X3.5 BK	Common	4	AA	X
	S5	1002 8705	SCREW	BT3 1.7X4.5 BK	Common	2	AA	X
	S6	1001 2596	SCREW	BT3 1.7X3.5 BK	Common	6	AA	X
	S7	1002 8702	SCREW	PS3 1.7X3.5 BK	Common	3	AA	X
	S8	5861 3551	SCREW	1.7X3.0 BK	Common	2	AA	X
	S9	1003 4921	SCREW	ST1 2X3.0 BBC	Common	2	AA	X
	S10	1002 8693	SCREW	BT3 1.7X5.5 BK	Common	2	AA	X
	S11	1002 5765	SCREW	BT3 1.7X4.0 BK	Common	4	AA	X
	S12	5860 5733	SCREW	BT3 1.7X12 NI	Common	1	AA	X

ACCESSARY

N	Item	Code No.	Parts Name	Specification	Applicable	Q	Price Code	R
N		1005 5570	CD-ROM(MS)	CK785DCA01R	Except for US	1	AK	X
		3816 0266	BATTERY/ALKALINE	LR6PA/2ST	Common	2	AG	X
		1014 8773	CABLE/VIDEO	VC-K723-FC	Common	1	AL	C
		1015 1424	CARD/CF 8MB	HB289008C4QV	Except for US	1	DF	C
		3502 2744	CABLE/USB	59204-2301	Common	1	BK	C
		1015 1471	CABLE/PC-LINK	LC9F-DOS-K740-L	Except for US	1	BU	C
		1003 7528	CAP/LENS	LC-K717-A	Common	1	AH	C
N		1005 1462	HOLDER/CAP	CH-K786	Common	1	AF	C
N		1005 5566	STRAP	ST-K787	Common	1	AG	C

Notes: NEW: New registration parts
Q: Quantity used per unit
R: Rank

PCB

N	Item	Code No.	Parts Name	Specification	Applicable	Q	Price Code	R
BL-PCB								
	CN900	3502 2230	CONNECTOR	SM03B-SRSS-TB	Common	1	AC	X
	Q902	2259 2744	TRANSISTOR/DIGITAL	DTA143EETL	Common	1	AA	X
	Q903	2259 2789	TRANSISTOR/ARRAY	IMX17T110	Common	1	AA	X
	T900	3012 1624	TRANSFORMER/INVERTER	BLT1.8K713	Common	1	AT	X
D-PCB								
	CN340	3501 8491	CONNECTOR	52435-2691	Common	1	AE	X
	D340	2390 1379	DIODE/SCHOTTKY	MA729-(TX)	Common	1	AB	X
	D350	2390 1820	DIODE/CHIP	1SS355TE-17	Common	1	AA	X
	D351	2360 3060	DIODE/ZENER/CHIP	MA8100-H(TX)	Common	1	AA	X
	D352	2390 1358	DIODE/VARICAP/CHIP	MA329-(TX)	Common	1	AC	X
	H520	2590 2707	OSCILLATOR/CERAMICS	CSTCC4.00MG-TC	Common	1	AC	X
	IC330	2114 5805	IC	NJM3414AV-TE1	Common	1	AF	X
	IC521	2105 6486	IC	S-80835ANNP-EDZ-T2	Common	1	AB	X
	IC522	2105 6485	IC	S-80830ANNP-EDT-T2	Common	1	AB	X
	SW510	1002 1883	SWITCH/SLIDE	SSSS812-B-2B	Common	1	AB	B
	SW520	2254 0555	SWITCH	ESE22MH4	Common	1	AC	B
	VR301	2775 3464	RESISTOR/SEMIFIXED/CHIP	POZ2AN-1-203N-T00	Common	1	AA	X
	VR302	2775 3465	RESISTOR/SEMIFIXED/CHIP	POZ2AN-1-503N-T00	Common	1	AA	X
	VR303	2775 3464	RESISTOR/SEMIFIXED/CHIP	POZ2AN-1-203N-T00	Common	1	AA	X
	VR304	2775 3464	RESISTOR/SEMIFIXED/CHIP	POZ2AN-1-203N-T00	Common	1	AA	X
	VR305	2775 3464	RESISTOR/SEMIFIXED/CHIP	POZ2AN-1-203N-T00	Common	1	AA	X
	VR306	2775 3465	RESISTOR/SEMIFIXED/CHIP	POZ2AN-1-503N-T00	Common	1	AA	X
	VR320	2775 3464	RESISTOR/SEMIFIXED/CHIP	POZ2AN-1-203N-T00	Common	1	AA	X
JK-PCB								
	C860	2845 6624	CAPACITOR/BACK-UP	EECS0HD104H	Common	1	AF	X
	D810	2390 1379	DIODE/SCHOTTKY	MA729-(TX)	Common	1	AB	X
	D811	2390 1379	DIODE/SCHOTTKY	MA729-(TX)	Common	1	AB	X
	D830	2390 1477	DIODE/CHIP	MA142WA-(TX)	Common	1	AA	X
	IC800	2105 6490	IC	TK15405MTL	Common	1	AH	X
	IC810	2105 5712	IC	TC7S04FU(TE85L)	Common	1	AB	X
	IC821	6571 0037	IC/L-MOS	TC7W00FU(TE12L)	Common	1	AD	X
	JK800	3025 1937	JACK	HSJ1636-011020	Common	1	AE	B
	JK810	3501 8197	JACK/MINI	HSJ1169-019010	Common	1	AF	B
	JK820	3502 2717	CONNECTOR	55427-0428	Common	1	AJ	B
	Q424	2259 2731	TRANSISTOR/DIGITAL	DTA114EE-TL	Common	1	AA	X
	Q426	2259 2731	TRANSISTOR/DIGITAL	DTA114EE-TL	Common	1	AA	X
	Q801	2259 2715	TRANSISTOR/DIGITAL	DTC144EETL	Common	1	AA	X
	Q810	2795 8150	FET/CHIP	2SK2035(TE85L)	Common	1	AA	X
	Q820	7911 3830	FET	2SJ347(TE85L)	Common	1	AA	X
	Q840	2259 2745	TRANSISTOR/DIGITAL	DTC143EETL	Common	1	AA	X
	SW850	1002 8209	SWITCH/SLIDE	SPVG31-T	Common	1	AB	B
KA-PCB								
	SW880	1001 4578	SWITCH/TOUCH	TSW-3D-T50	Common	1	AC	C
	SW881	3412 1995	SWITCH/TACT	SKQRAA-T	Common	1	AB	C
	SW882	3412 1995	SWITCH/TACT	SKQRAA-T	Common	1	AB	C
	SW883	3412 1995	SWITCH/TACT	SKQRAA-T	Common	1	AB	C
	SW884	2254 0555	SWITCH	ESE22MH4	Common	1	AC	C
	SW885	2254 0555	SWITCH	ESE22MH4	Common	1	AC	C
	SW886	2254 0555	SWITCH	ESE22MH4	Common	1	AC	C

Notes:

NEW: New registration parts

Q: Quantity used per unit

R: Rank

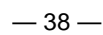
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KB-PCB								
	SW895	3412 1995	SWITCH/TACT	SKQRAA-T	Common	1	AB	C
	SW896	3412 1995	SWITCH/TACT	SKQRAA-T	Common	1	AB	C
	SW897	3412 1995	SWITCH/TACT	SKQRAA-T	Common	1	AB	C
	SW898	3412 1995	SWITCH/TACT	SKQRAA-T	Common	1	AB	C
PW-PCB								
	CN100	3501 7091	CONNECTOR/PCB	53254-0310	Common	1	AA	X
	CN103	3502 2437	CONNECTOR	52745-1690	Common	1	AC	X
	D100	2390 2506	DIODE	RB060L-40-TE25	Common	1	AD	X
	FU100	1001 2479	FUSE/CHIP	434.750	Common	1	AB	A
	FU101	1000 9214	FUSE/CHIP	434001	Common	1	AB	A
	FU102	1000 9214	FUSE/CHIP	434001	Common	1	AB	A
	FU103	1003 4689	FUSE/CHIP	43401.5	Common	1	AB	A
	JK100	3501 6755	JACK/POWER	HEC3600-010120	Common	1	AD	B
	Q110	2254 0570	FET	SI2301DS-T1	Common	1	AE	X
	Q115	2254 0570	FET	SI2301DS-T1	Common	1	AE	X
	Q120	2795 8157	FET/CHIP	CPH6401-TL	Common	1	AE	X
	Q121	2259 2715	TRANSISTOR/DIGITAL	DTC144EETL	Common	1	AA	X
	Q130	2250 1596	TRANSISTOR/CHIP	SI2302DS-T1	Common	1	AE	X
	VR135	2775 3465	RESISTOR/SEMIFIXED/CHIP	POZ2AN-1-503N-T00	Common	1	AA	X
	VR136	2775 3465	RESISTOR/SEMIFIXED/CHIP	POZ2AN-1-503N-T00	Common	1	AA	X

Notes: NEW: New registration parts

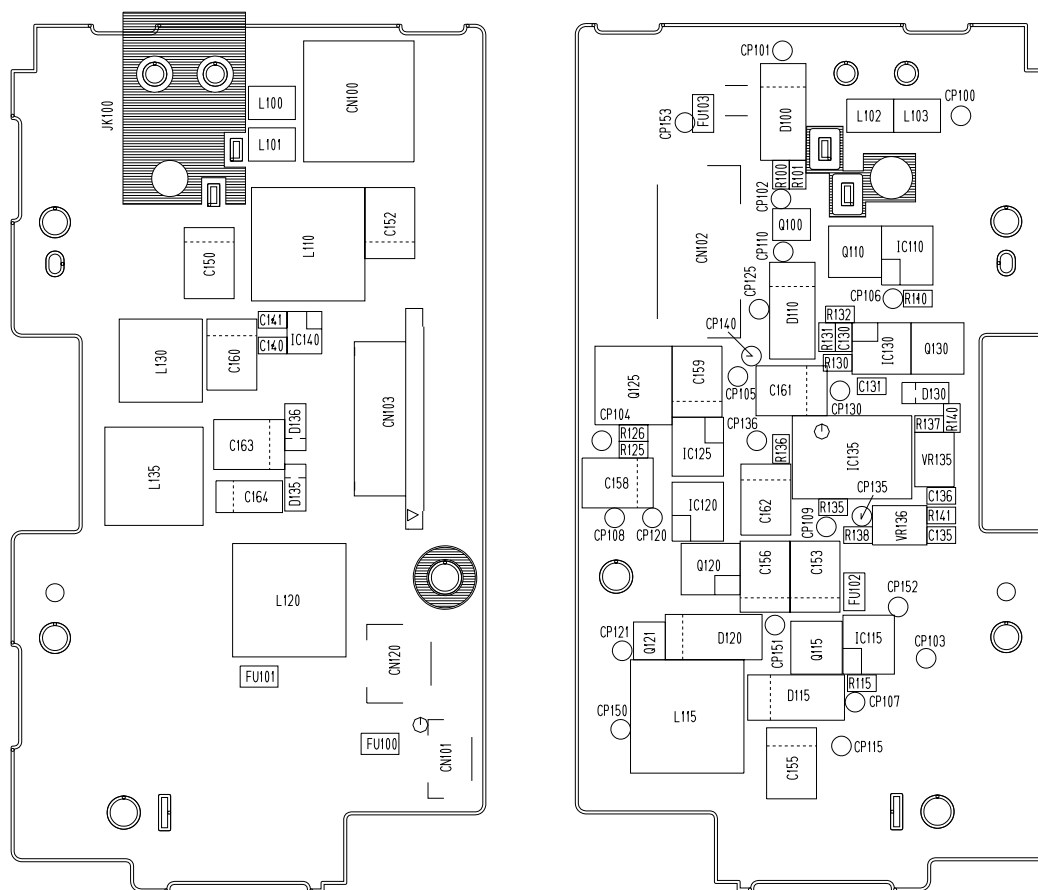
Q: Quantity used per unit

R: Rank

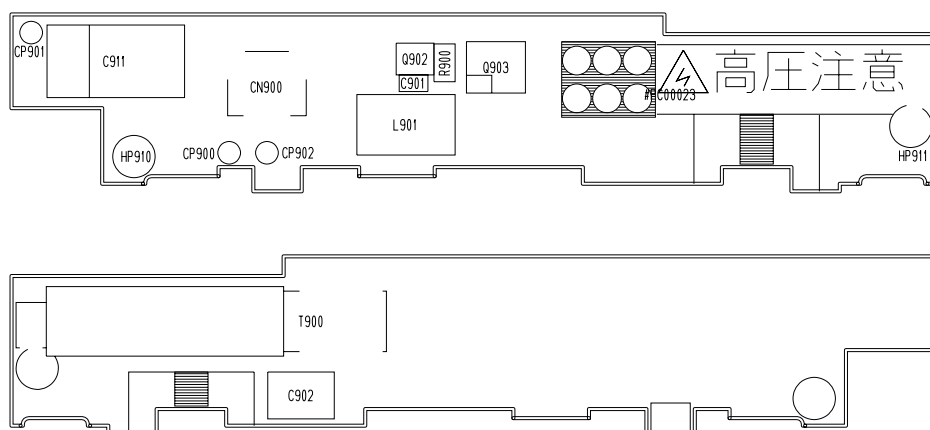
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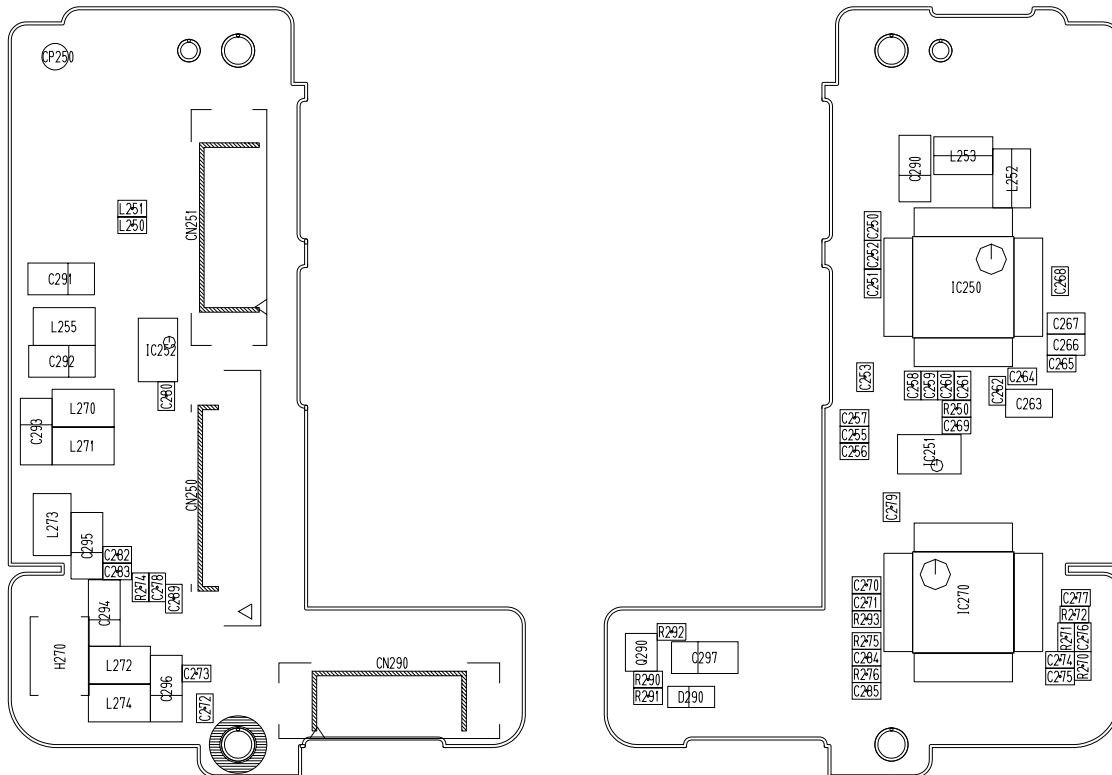
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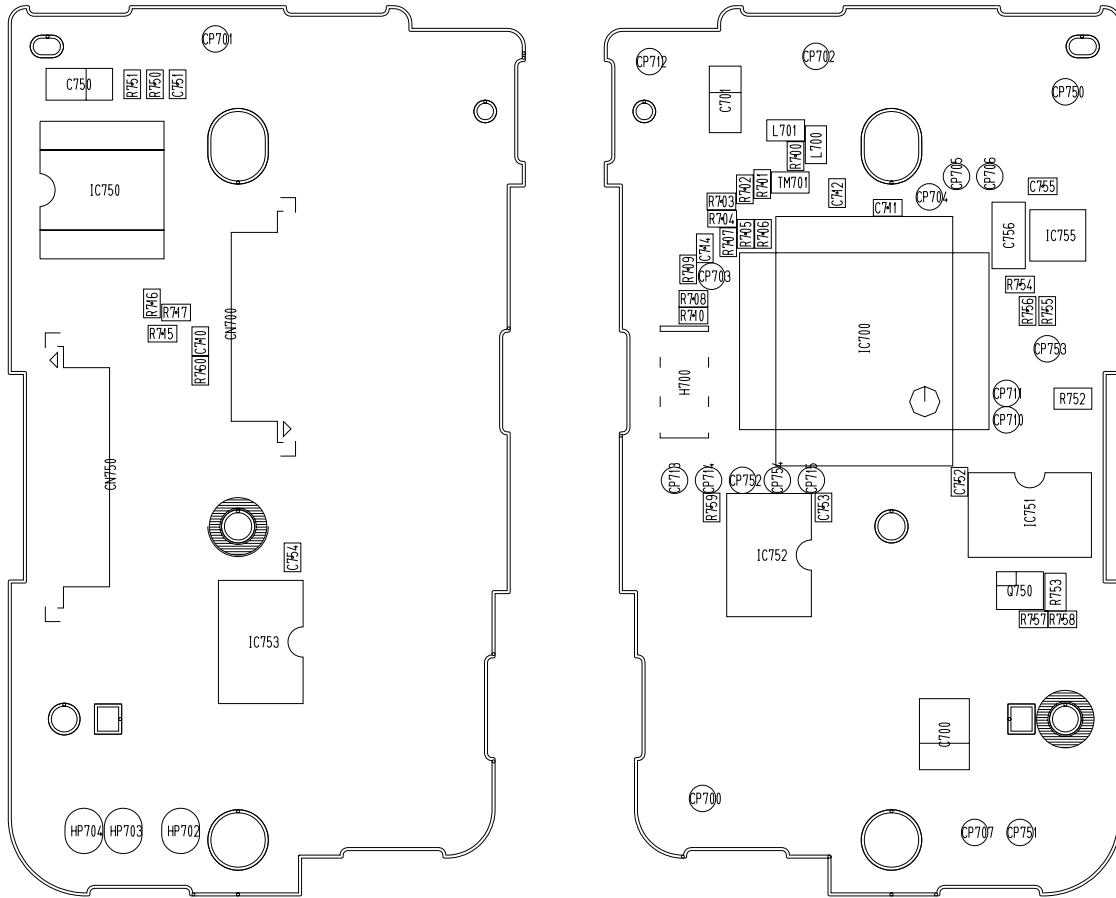
BACK LIGHT-PCB (PCB 715-BL)



C-PCB (PCB 717-C)



MD-PCB (PCB 717-MD)



CN200

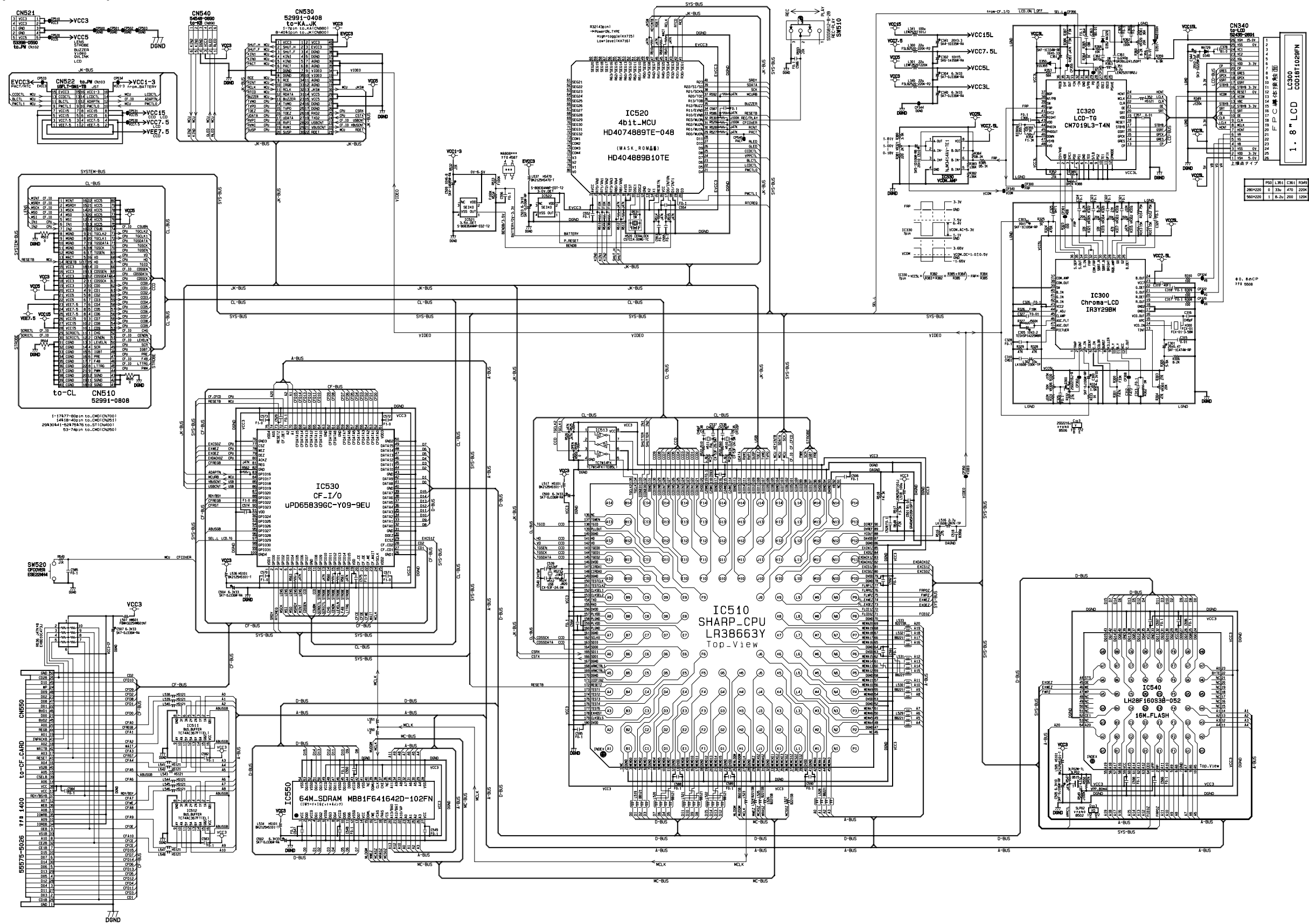


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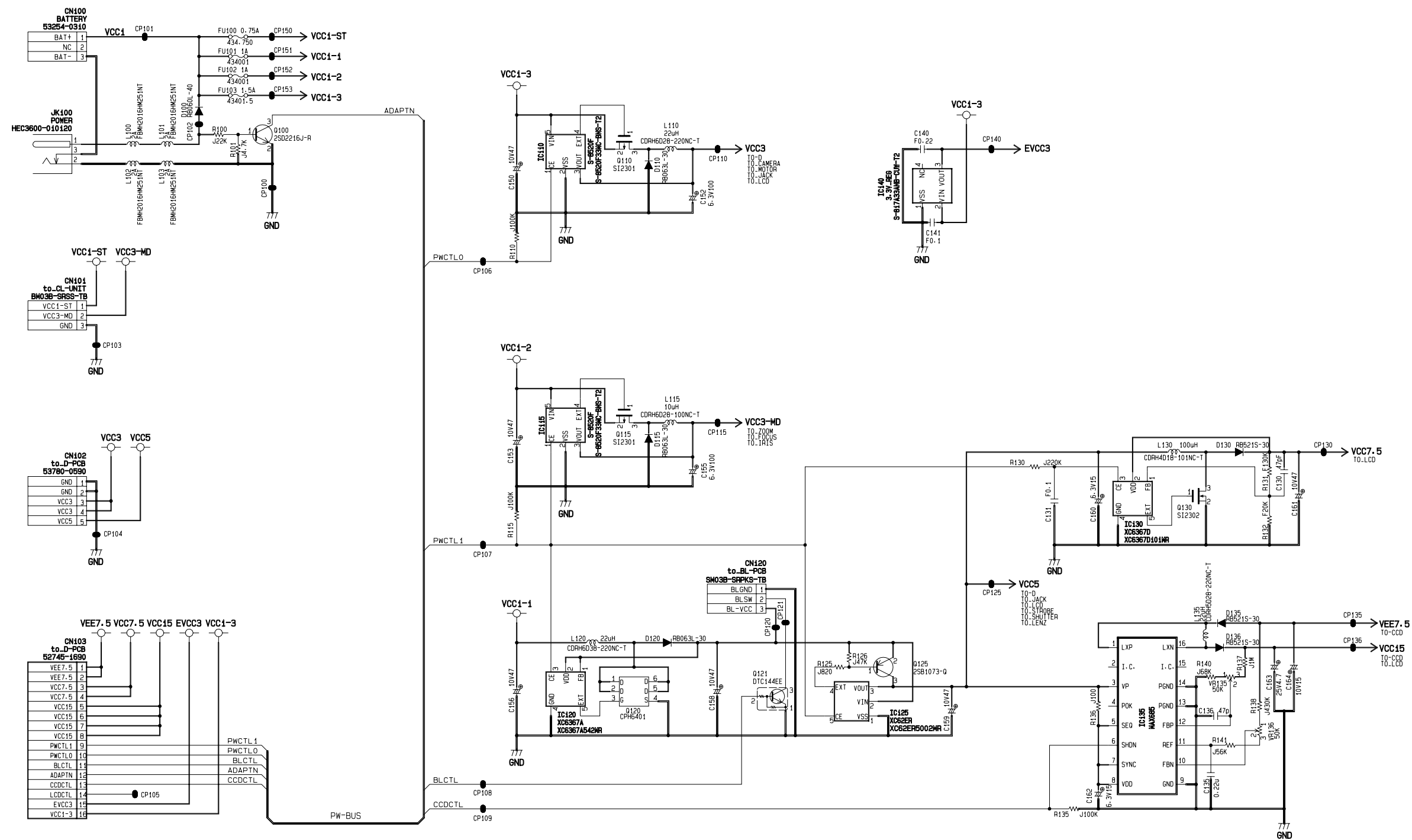


SCHEMATIC DIAGRAMS

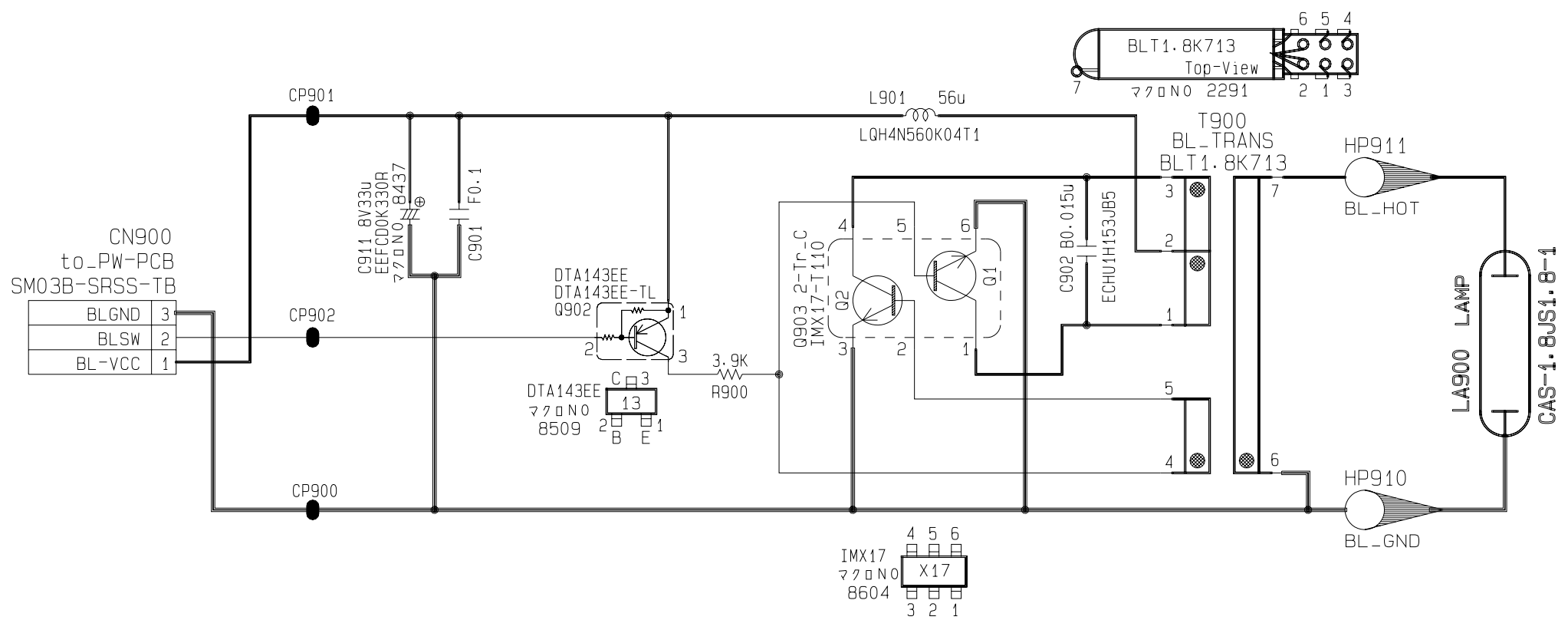
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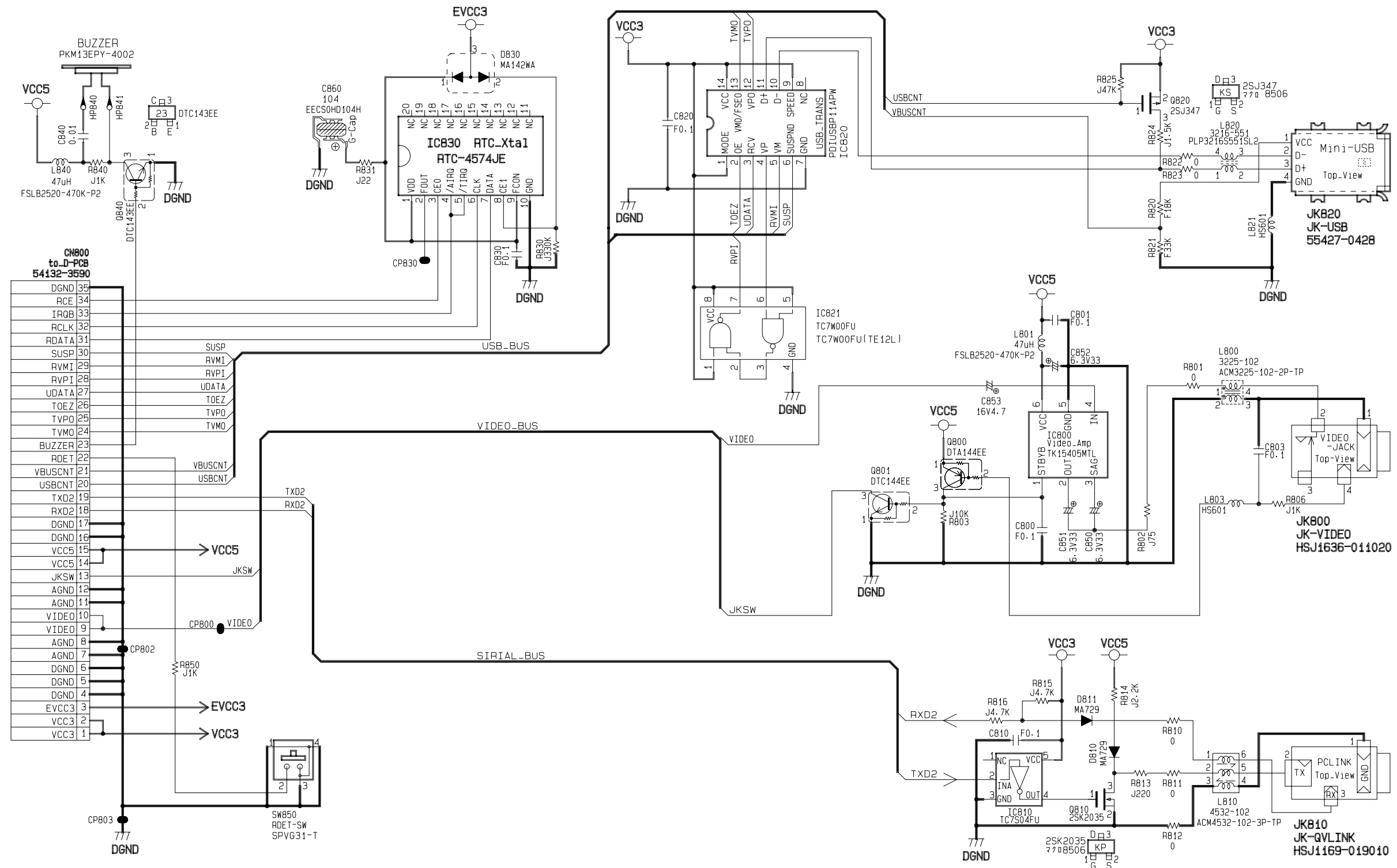
POWER-PCB (PCB-715A-PW)



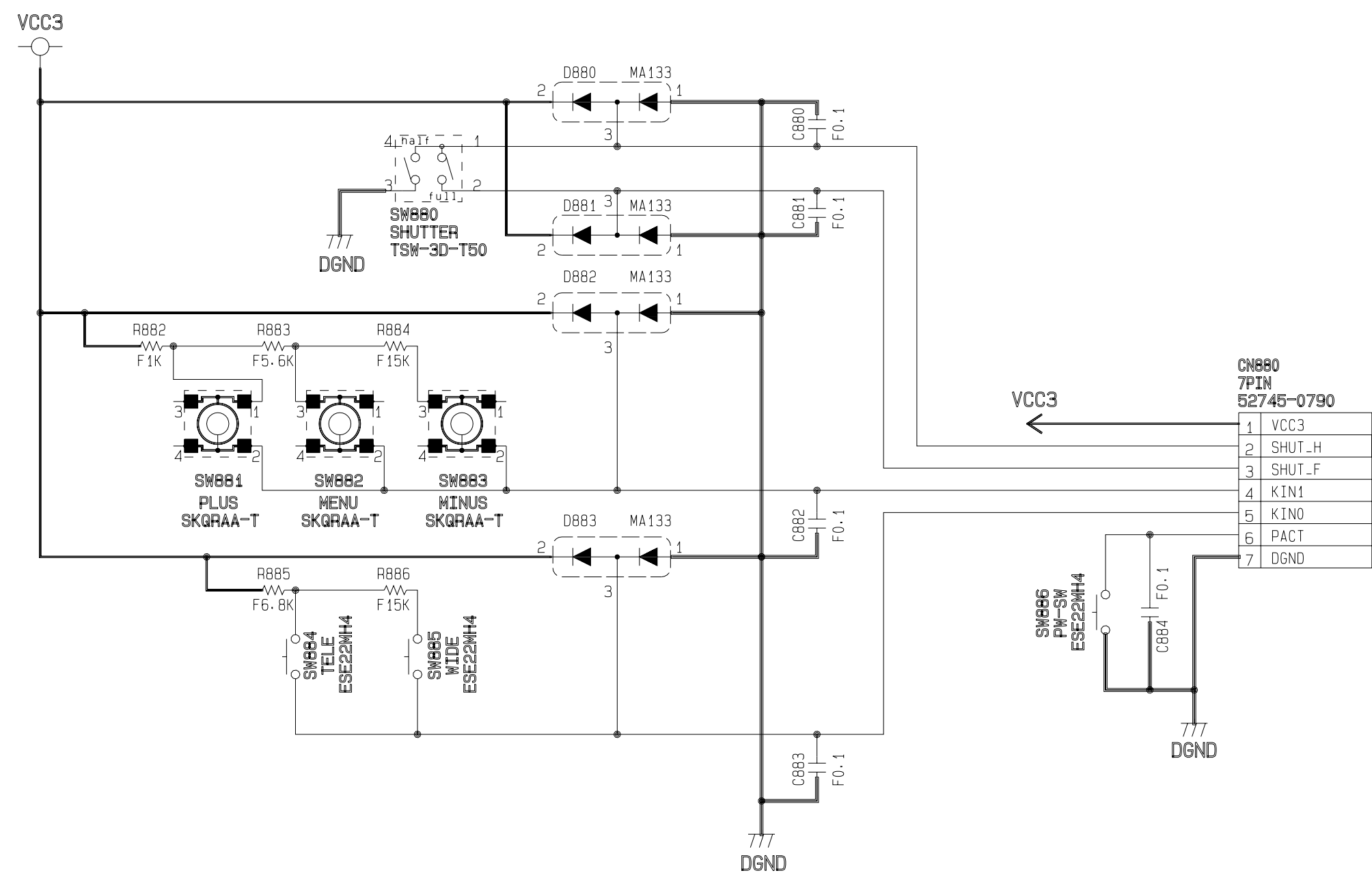
BACK LIGHT-PCB (PCB-715A-BL)



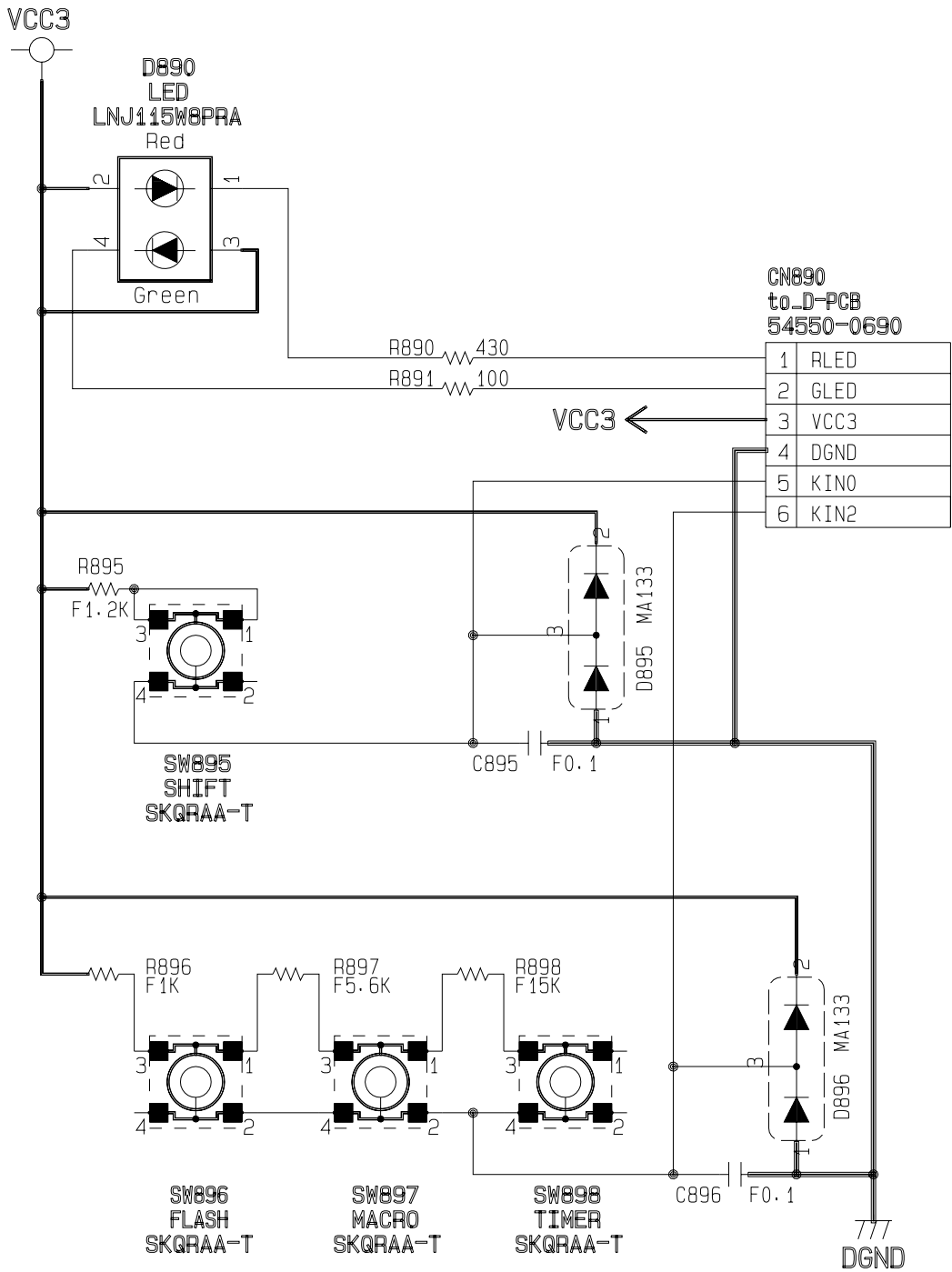
JACK-PCB (PCB-715A-JK)



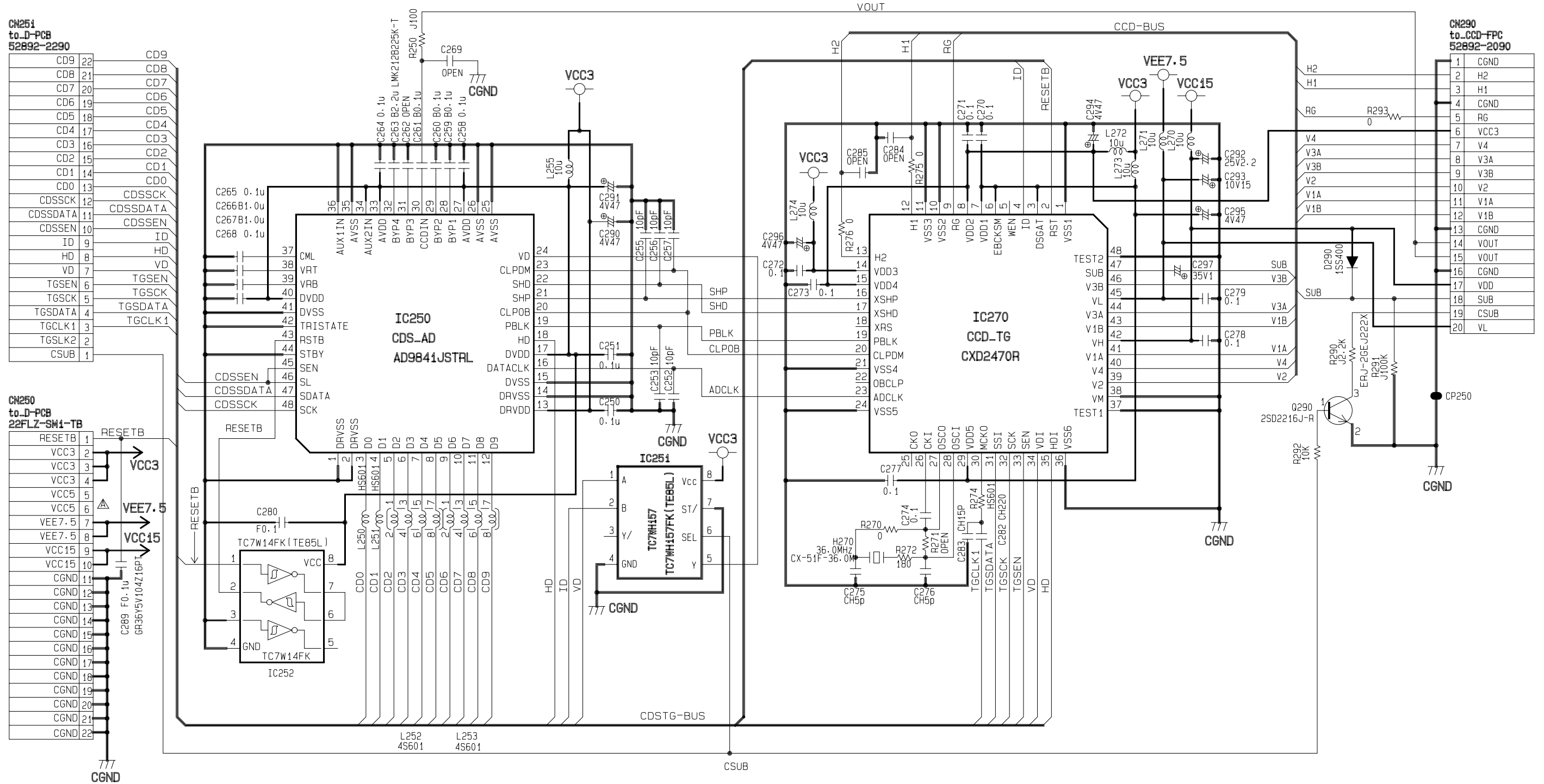
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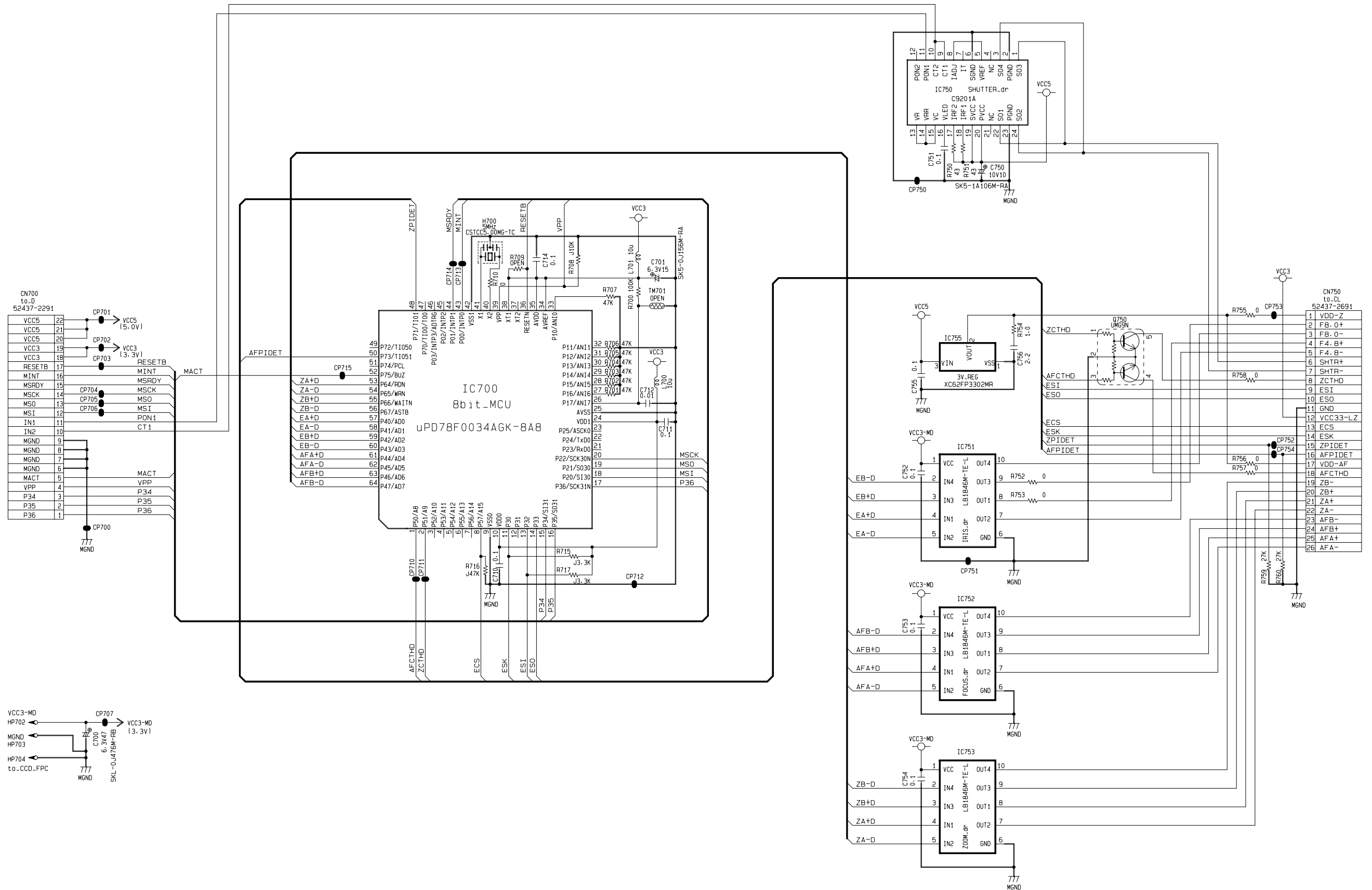
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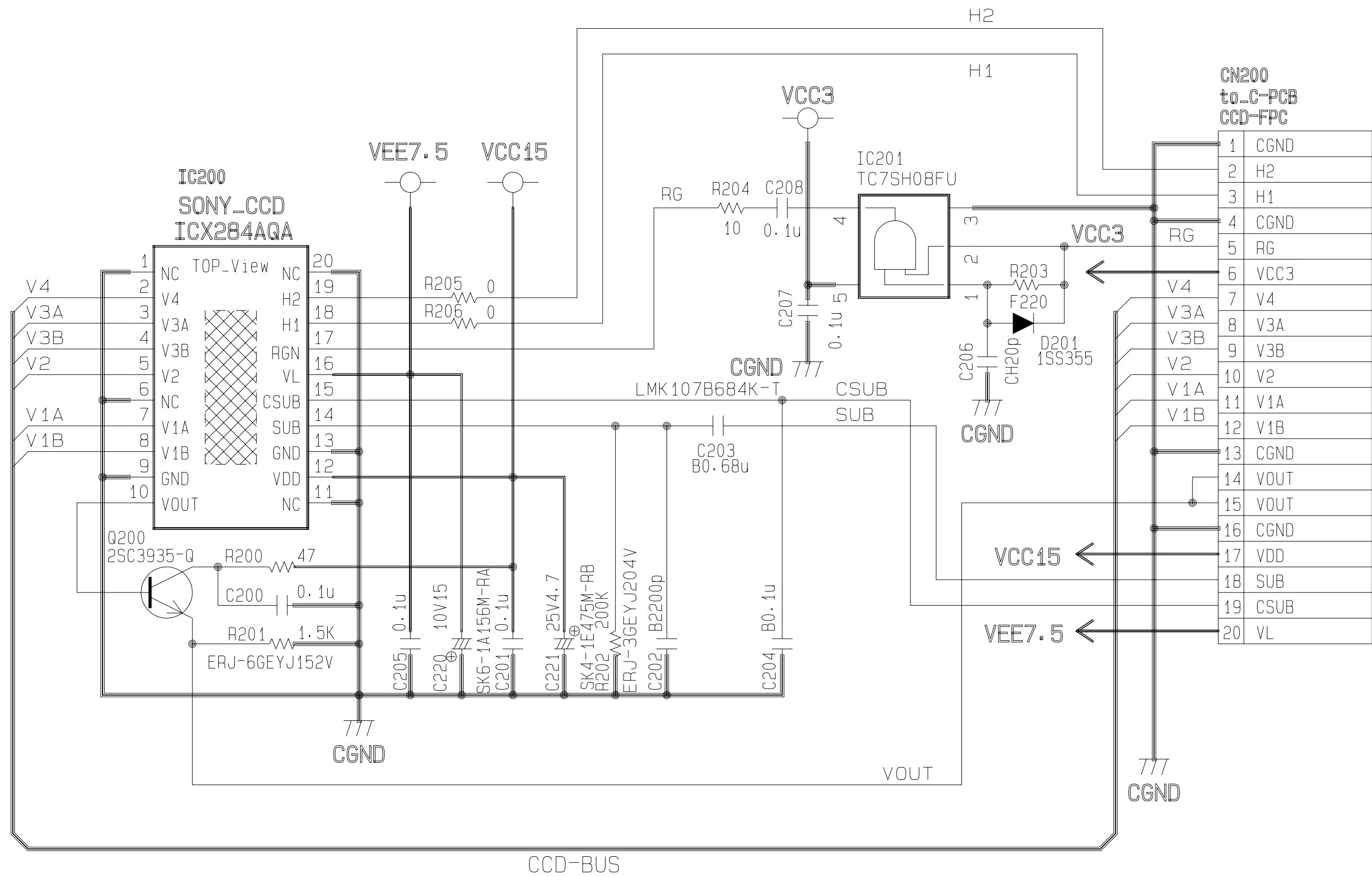
C-PCB (PCB-717C)



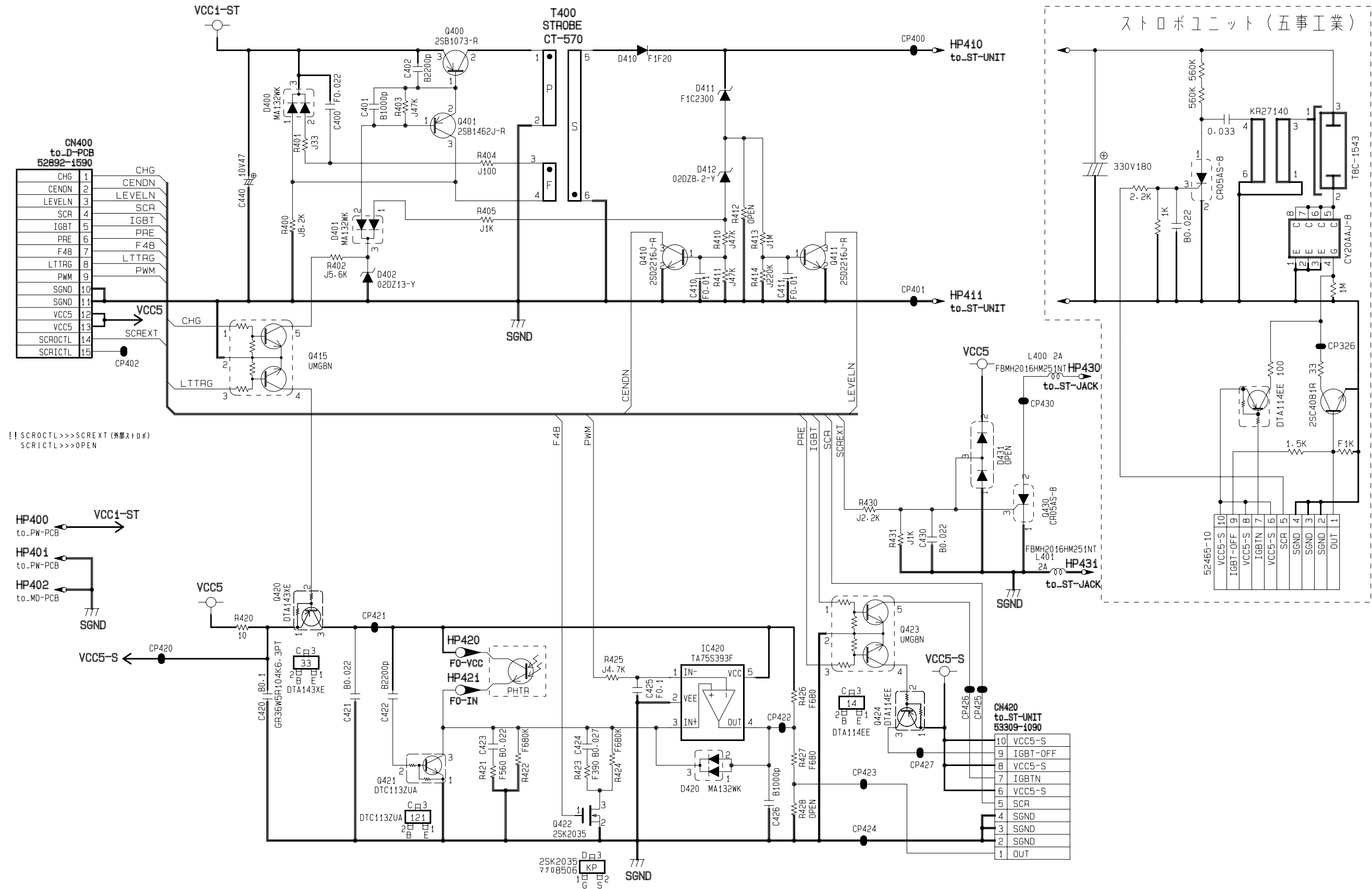
MD-PCB (PCB-717MD)



CCD-PCB (PCB-717CCD)



ST-PCB (PCB-717A-ST)



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